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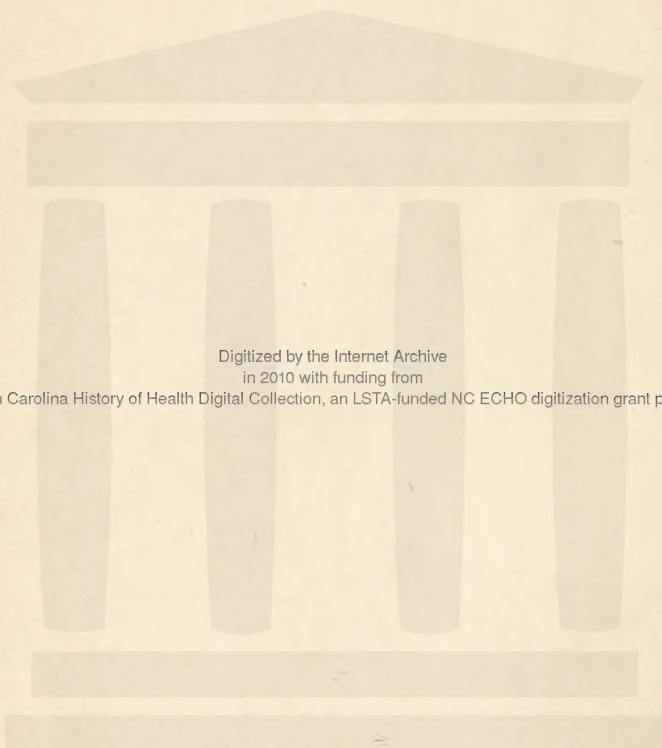
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THE SIGNIFICANCE AND IMPORTANCE OF PERIODIC MEDICAL EXAMINATIONS*

H. S. CUMMING, M.D., Surgeon General U. S. Public Health Service, Washington, D. C.

I welcome the opportunity to discuss with you this evening the subject of periodic medical examinations. A good deal, as you know, is at present being written and said upon this theme. Just last week a conference of the secretaries of all the State medical societies and the Board of Trustees of the American Medical Association was held for the study and promotion of such examinations through the county and State medical societies. The medical profession generally appears to be very much in earnest about this matter and, as I shall attempt to indicate hereafter, this proposal, though still recent in origin, has passed from an academic to a practical stage.

The movement is significant from the standpoint of preventive medicine because it emphasizes the importance of the individual assuming a larger share of responsibility for his own health through utilizing the services of his physician for health promotion as well as for disease prevention. Simple as such a proposal may appear, it marks, as I see it, a somewhat new tendency in health work. Those of us who have been primarily concerned with the problem of public hygiene and preventive medicine as developed during the past few decades realize that our scientific resources have been pretty largely, though not exclusively, devoted toward protecting man from external agents—from parasitic diseases, which so far as the individual is concerned were largely fortuitous, and from unwholesome and morbid environmental factors and influences. While we have been thus engaged we have not seriously interfered

with man's personal outlook on health and disease which remains pathetically archaic in spite of the remarkable advances in medical knowledge. "Keeping the doctor away" is to the average man still a measure of fitness, and there are yet too many people who regard the physician as a "man of mystery" to be sought only as a last resort. I confidently believe that as the practice of periodic medical examinations become more and more nearly universal that this medieval attitude will undergo a complete change and that the physician will come to be recognized more and more as a "health counsellor."

As medical men, we recognize more fully than ever before that we cannot come anywhere near our potentialities in preventive medicine and health promotion until every individual, in a conscious, deliberate and personal sense seeks to avoid unhygienic, health destroying practices which lead to functional disharmony, to degenerative changes, and to morbid processes, and undertakes in a positive sort of way the attainment and maintenance of health and bodily harmony. I shall not insist that such a Utopia can be achieved through so simple a procedure as periodic medical examinations. That the application of this procedure on as nearly universal a scale as possible is a step in the right direction no one can seriously deny. Health examinations cannot be dismissed as a passing fad, for the efforts already undertaken by reputable medical and health organizations to give them a conspicuous place in our health programs is assurance enough of their significance and importance.

One of the earliest presentations of this subject in a formal way was at the

*Read before Seaboard Medical Association, Norfolk, Dec. 1, 2 and 3, 1925.

annual meeting of the American Medical Association in 1900. Doctor George M. Gould, of Philadelphia, in addressing the Association at that time anticipated the significance and importance of this movement when he said:

"All good medicine inevitably tends to become preventive medicine; all good physicians labor to stop disease before it arrives. The whole ingenuity of the trained diagnostician is now expended on the problem of the earlier symptom. He is the greatest discoverer who finds the presymptom, or the symptom of the symptom; the greatest therapist is he who cures before the disease exists, he who starves the bacillus to death, he who stops the evil habit, thus preventing the malfunction that becomes organic disease."

In 1910, additional light was thrown upon the subject by Irving Fisher's well known study, "National Vitality—Its Wastes and Conservation." His report states: "We must conclude that at all times in the United States about 3,000,000 persons are seriously ill." He estimated that fully half this illness was preventable.

Among the first organizations to undertake periodic medical examinations were some of the larger insurance companies who offered this service to their policyholders. An interesting report from one of these companies has just made its appearance in the *American Journal of the Medical Sciences* (October, 1925, p. 576). The principal findings relative to the physical condition of more than 16,000 men (which apart from the draft examinations constitutes one of the largest groups examined in recent years) are given in tabular form. "It is entirely credible," states the report, "that the facts shown for this group of more than 16,000 males are indicative of conditions in the general population of white males. If so, it is clear that a wider extension of periodic health examinations among the adult population is indicated. Hygienic advice and the prompt treatment of both major and minor defects thus discovered may lead to the prevention of serious consequences to those individuals later on.

Most of the defects and impairments discovered in the younger ages of adult life are subject to effective control."

What gave our complacent attitude toward health values the greatest jolt, however, was the appalling wartime disclosures of defects, abnormalities and disabilities among recruits. What made these revelations especially disconcerting was the fact that the men examined were presumably well and in an age group where optimum vitality was to be expected.

The cumulative force of these various revelations of our physical poverty led such organizations as the American Medical Association and the American Public Health Association to take cognizance of the problem and to project a definite program of action. In 1922, the American Medical Association went on record urging county medical societies to make public declaration that their members are prepared and ready to conduct such examinations, it being understood that the indigent only shall be examined free of charge and that all others are expected to pay for such examinations. This stand has been reiterated at every subsequent meeting of the Association. Particularly impressive was the resolution presented by the Committee on Hygiene and Public Health at the Chicago meeting in 1924, which reads as follows:

WHEREAS, Periodic medical examinations of all the people from birth to death are of great importance in the promotion of health; therefore be it

RESOLVED, That state and county medical societies be urged to endorse as a part of the health program of organized medicine the making of these examinations:

That the members of the respective societies be requested to make such examinations in the homes or in their offices, free to any persons who, by reason of economic conditions, require such favorable consideration, and

That in the performance of the work the same sympathetic confidential relation be maintained between physician and patient or family as has ever characterized the efforts of true physicians.

At this meeting the preparation of a manual of instructions for physicians was authorized. This manual should be available at an early date. Examination forms, with which many of you are doubtless familiar, have also been distributed by the Association to the extent of 100,000 copies. At the 1925 meeting in Atlantic City it was further decided that owing to the nationwide need and interest in physical examinations the Bureau of Health and Public Instruction be empowered to call a conference to correlate the work already done and devise a nationwide plan for adoption. This is the conference which convened last week.

Besides the interest which the national organizations are taking in this matter, I might refer briefly to what some State and county medical societies are doing in a concrete way to promote this particular program. One State society (Massachusetts) has just issued a handbook for health examinations by physicians. The handbook, according to its authors, is not in the nature of a text book of diagnosis or treatment, nor an exposition of any new specialty in medicine, but is simply a description of the general technique of such examinations for the general practitioner whose function it should be to perform them. "We know," says the Committee which prepared the manual, "that by periodic careful physical examinations, with a standard of normality well in mind, the beginnings of certain diseases or tendencies toward them may be detected while they are still curable or preventable. Here again the family physician finds for himself a place in the practice of preventive medicine that can be filled by no one else."

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Another example of organized activity is that of a county society (Medical Society of the County of Kings, Brooklyn, New York) which undertook to have physicians themselves take the lead in this work by undergoing health examinations personally. This same society sent circular letters to 2,500 physicians in the county which included the following observation: "The private physician is more or less familiar with

the patient's interests and environment and therefore better able to render health service to the individual than is the case when the examinee comes as a stranger to a strange physician. This is important—the success of a health examination depends more upon the rapport between physician and examinee than does a diagnostic examination." One outstanding difficulty is referred to, that of the emergency nature of private practice. To overcome this disadvantage the suggestion is made that the examinations be planned for in advance.

Another significant undertaking to which I wish to refer is that of the Medical Society of the County of New York. The Society recently conducted a symposium, held at the New York Academy of Medicine, at which an impressive series of papers was presented by recognized leaders in their respective fields of medicine, covering practically every phase of medicine from the preclinical point of view. The introductory paper sounds the keynote of the symposium:

"A new field is opening for the physician. I venture to predict that in the future, all intelligent men and women will have their own health physician to whom they will look to keep them well and vigorous. This will not come until the public recognizes the fact that the physician can adequately give this service. To hasten the day and to insure its coming, we shall be wise to address ourselves to the task of becoming as efficient and successful in this field as in the field of prevention of communicable illness and the cure of disease."

A review of these several substantial undertakings, which by no means covers all that is being done, indicates that we are moving in the direction of a rather well defined effort to widen the scope of preventive medicine with the private physician occupying the key position. That the program which these examinations on a large scale contemplate is fraught with difficulties as well as with significant possibilities no one will deny. The nature of some of these difficulties I have already referred to. Slo-gans alone will not insure success.

There are ancient traditional attitudes to overcome both on the part of the lay public and the physician. It is still customary for both to think of health as the mere negation of disease. Some of our medical concepts may have to undergo revision. Even words may play an important role in popularizing this movement for already we note a tendency to refer to the physician as health counsellor and the patient as "health client." I might suggest any number of problems calling for a solution if the procedure under discussion is to have anywhere near a universal application, but the difficulties, real as they may be, should not close our eyes to the significant and far-reaching implications of this proposal. As I see it, there are important implications: (1) for individual, (2) for society and (3) for medicine.

What such examinations will mean to the individual is perhaps obvious enough. Not only should the early detection of unhygienic habits, of functional disorders, and of minor as well as serious pathological conditions, make for an increased longevity but should result as well in an increased efficiency and capacity for the enjoyment of life. Length, it is well to remember, is not the only dimension by which to measure life even from the medical standpoint. There is also the dimension of "breadth" which is positive health as distinguished from mere absence of disease. It is not enough that man should be permitted to grow old. He should have vigor and vitality in the prime of his life, and as he advances in years he should not be forced to suffer the debilitating and disintegrating processes associated with senility. Senescence for him should be as much a creative and productive period of life as any other. Such a prospect is certainly not beyond practical achievement.

There is no need, I am sure, to dwell at length upon the social implications of increased individual well being. We can estimate in a rough way the national economic loss resulting from the impaired efficiency of the vast army of borderline cases—the half sick and the

half well. Consider merely the heads of families who go on for years, vaguely conscious perhaps of deficient vitality, but who never seek medical advice or aid until they are partially or completely disabled for gainful occupation. A simple precaution or correction early enough might have sent them on their way to financial independence resulting in higher familial standards of living in the educational and social as well as the economic sphere. The emphasis which organizations interested in social work and in the prevention of crime, delinquency, and dependency are placing upon health promotion and the support which they are giving to the health examination movement is significant proof of the importance of health among the social values.

And now a final word as to the significance of this movement to medicine as a science. We are still too much inclined to place disease and health in distinct categories, and yet how well we know that the line of demarcation is imperceptible. Our knowledge is scantiest where the two appear to merge and for that reason we may look for new light and significant facts as more and more persons, presumably well, are brought under the scrutinizing eye of the physician trained to detect danger signals. A solemn scientific duty will rest upon the examining physician to keep accurate records, to note all of the facts in the clinical or preclinical picture. The value of such painstaking procedure is already being demonstrated with respect to many disorders. Impairment of the cardiovascular system, for instance, suggests to the trained observer an increasing number of "causes." Whether the embarrassed condition is associated with syphilis, with focal infection, with overweight, or any number of other factors, needs to be faithfully recorded. As these case histories multiply and as we obtain larger numbers of individual clinical pictures covering a period of years, the significance of periodic medical examinations to medicine will become increasingly apparent.

A DISCUSSION OF CONVULSIONS

BEVERLEY R. TUCKER, M.D., Professor of Neurology and Psychiatry, Medical College of Virginia, Richmond

In the present discussion of convulsions spasmophilic and certain other states not accompanied by unconsciousness will be discarded. It is possible, however, that some of these states, amnesias, tantrums, trances, catatonias, Jacksonian attacks are more or less related to convulsions but invade the nervous mechanism as variants or at other levels, while in vagotonic attacks, tetany and the myoclonias connection may not be readily traced.

It is interesting to note the conditions in which convulsions, of typical form, may be observed,—uremia, eclampsia, cerebral hemorrhage, cerebral injury, brain tumor, brain abscess, meningitis, encephalitis, cerebral anemia, variable vascular tension, cerebral toxemia, cerebral lues, increased intracranial pressure, asphyxia, febrile states, rickets, Stokes-Adams disease, certain cases of hypopituitarism and subthyroidism, parasitic diseases, dementia precox and poisonings by alcohol, absinthe, arsenic and lead. And this list is not complete. It would seem that any phenomenon which makes its appearance in so varied an assortment of conditions whether it occurs once, in series or with periodicity, should only be considered as a symptom.

If it is true, then, that a convulsion is a symptom, and a symptom of heterogeneous conditions, it would follow that there must be some common cause, condition or state which would allow a convulsion to be produced. It would follow also that unless these many conditions, in which convulsions appear, uniformly affect the motor cortex, the convulsion can not be considered, solely, a motor cortex manifestation. It would further appear that when one speaks of epilepsy one should refer to the disease, condition or state of which the convulsion is a symptom, rather than to the periodical convulsions themselves. Lastly, it follows that remedial drugs and procedures should be directed primarily toward hygienic regulation of

the patient and the correction, if possible, of the underlying condition, and only secondarily toward the suppression of convulsive attacks.

While definite conclusions may not be reached, our discussion will follow along the lines indicated above in the hope that it will, at least, be provocative of constructive thought.

White and Jelliffe describe the breaking of energy at any level; hysterical seizures being superficial and converting painful ideas into physical symptoms; psychastenic convulsions being deeper but still at psychological levels; the convulsions of Bratz and Leubuscher, due to a reaction to an intolerable situation to which there is no adjustment, being still deeper psychologically and having usually the history of infantile convulsions; the genuine epilepsy involving the sensori-motor and biochemical levels. Clark thinks that convulsions have a psychological setting and that baby talk, assumption of fetal position and passage of urine during an attack indicate, in some cases, a reversion to the infantile type of conduct. In other words both of these conceptions suggest that the convulsion has to do, as the former puts it, with "biological adjustments at deep instinctive levels."

On the other hand Elsburg and Stookey have shown that, experimentally at least, the production of sudden anemia causes unconsciousness, while returning blood, when the constriction to cerebral circulation is released, produces convulsions. Dandy and Elman state that convulsions in animals may be produced, experimentally, by one of six general ways: (1) by anemia of the brain, (2) by asphyxia of the brain, (3) by traumatic stimulation of the central nervous system, (4) by chemical stimulation of the central nervous system, (5) by electrical stimulation of the central nervous system, (6) by injury to the brain by traumatic, chemical or electrical stimulation. Aldren Turner believes that for an epileptic convulsion to ensue

cerebral cellular (chiefly cortical) defects must be present and there must be blood changes shown mainly by increase in blood platelets.

Conflicting as these two sets,—i. e. psychological versus physical, of ideas appear upon casual consideration, they may not, upon reflection, be found quite antagonistic. Like theology and science, they both may, in my opinion, be digested by the same mental apparatus and excreted as an amalgamated thought projection, certainly by the time that the fundamentalists' idea of heaven and hell shall have melted away.

In fact, in considering these conceptions, we are merely looking at the clock on both sides,—on one side we see the hands go around on their pivot,—and on the other we see the works. We may assume, therefore, I think, on the face of it, that no convulsion can occur, that the alarm can not go off, without some sort of cerebral change, circulatory, traumatic, electrical, chemical, or psychological; which is the same as saying mechanical, structural, reflex, toxic or emotional. In other words, the clock must be wound, stimulated, if we expect to see the hands go around and hear it tick, and, if we expect the alarm to go off, it too must be stimulated. Sudden change, quantitative or qualitative, in circulation probably represents the medium of the convulsion stimulation,—the alarm starter. In some convulsions which have been observed when the brain is exposed, the cerebral vessels may be seen to enlarge and congest prior to the convulsion.

All things considered we must, I think, conceive of a convulsion as a general cerebral episode and cease to emphasize its connection with the motor cortex. The consideration of the psychic area of involvement in convulsions brings to mind automatism, the so-called epileptic equivalents, psychic aura, the relationship to amnesia and post epileptic hallucinations. The aura, also, may be psychic, visual, olfactory, auditory, sensory, or at times emotional, as well as motor. These are more common indeed than motor aura. When loss of consciousness comes on it obscures the

picture. In fact loss of consciousness, not the convulsive movements, is the dominant feature of the convulsion. This idea is further strengthened by considering Jacksonian attacks in which, although there is a definite motor cortex lesion with motor phenomena, the most serious aspect of the case occurs when they "spread" and consciousness is lost. It would seem that when consciousness is resumed there should be, in the ordinary convulsion, remnants of motor loss or irritation, if the motor cortex disturbance is the chief factor in production of the convulsion. If the motor cortex is the seat of the convulsion, it would be reasonable to expect each convulsion to begin with bilateral twitchings of some part of the extremities and advance symmetrically to general involvement. Dandy and Elman produced lesions in the motor cortex, occipital lobe and cerebellum of animals, and produced convulsions with absinthe in all cases, although in a smaller dose in those with motor cortex lesions. One wonders what the result would have been if lesions in the prefrontal, temporal and basilar regions were also investigated.

This discussion, though inconclusive, leads to the consideration of the underlying basis for convulsions. Purves Stewart states that Jacksonian attacks are due to interference with cortical circulation rather than to mechanical stimulation, and that meningitis may cause convulsions in basilar as well as cortical cases, due to increased intracranial pressure. That convulsions may occur in Stokes-Adams disease, a condition of distant circulatory disturbance is significant. In many cases it would appear that convulsions only ensue in individuals whose cerebral structure is such as to render them susceptible to convulsions, but upon deeper consideration, this is not always true, for no one has a brain so stable that he may not have a convulsion if he has uremia, and any woman may have convulsions in eclampsia. It has seemed that in idiopathic epilepsies a cerebral structural defect exists, but one again wonders why periodic convulsions are not common among

morons, the more markedly feeble-minded, and idiots. We have but little proof that the slight cell changes observed by Turner and others were not the result, rather than the cause, of the convulsions. It can not be shown that we have satisfactory autopsy proof that periodic or other convulsions are due, with any degree of uniformity, to cerebral cellular defects, although I have made the affirmative statement myself in the past. The cellular defect view would not account for psychological, hypopituitary or toxic convulsions, even with increased platelets in the blood stream.

From the great group of recurrent convulsions formally termed epilepsy, so many small groups have been cut off that there is left but little to which the terms epilepsy, or idiopathic epilepsy, are strictly applicable. Further research into biochemistry, psychology and constitutional pathology will probably relegate the term epilepsy to the same waste-basket in which have been thrown neurasthenia, biliousness and uric acid rheumatism.

The inciting causes of convulsions have been listed as almost anything from eating ham or peanuts to the occurrence of sudden joy or sorrow. Still, many attacks occur during sleep when the diet and experiences have been usual, and *petit* attacks occur minus attributable happenings. This does not mean, necessarily, that hygienic regulation will not lessen the frequency of the attacks.

The future will show, I think, that all convulsions are produced by some change in cerebral vascular stability which change, in turn, may be initiated by biochemical, toxicological or psychological states, and that the susceptibility to recurrence is due rather to cerebral vascular disturbance than to cerebral cellular defect.

This brings us to the question of treatment of recurrent convulsions which we may assume can not be intelligently inaugurated without very thorough and exhaustive examination. This examination should include, besides the routine medical and laboratory examinations, radiography of the head, sella turcica, gastrointestinal tract and heart, electro-cardiogram tracings, basal metabolism estimations, kidney function test, search of focal infection, examination of the gastric contents and stools, ophthalmological examination, examination of the cerebrospinal fluid, neurological examination, mental and emotional tests and last but not least psychogenic investigation. It would not be surprising if some circulatory structural condition may not be brought to light similar to that Nolan D. C. Lewis has described in dementia precox. It would be instructive to have these cases tested by such physical circulatory tests as those Trentzsch has used in the study of abnormal children.

When the case has been thoroughly investigated, all defects should, as far as possible, be corrected, the hygiene and life habits of the patient should be reconstructed to the best environment obtainable and all abnormal psychological factors should be adjusted. We should remember that recurrent convulsions are as much social and economic, as medical problems and that social and economic forces should come to the financial aid of medicine in carrying out these investigations. Philanthropic agencies could hardly do a better service than to establish clinics where all the studies indicated could be made.

212 W. Franklin Street.

SURGICAL PATHOLOGY OF PERITONITIS*

J. W. KENNEDY, M.D., F.A.C.S., Philadelphia

About fifteen years ago the profession lost interest in the pus forming and peritonitic lesions and concentrated its attention on the cleaner lesions of the upper abdomen.

It is interesting to watch the impress of conspicuous men on the literature of our profession. Until the last few months easily ninety per cent of the literature on abdominal surgery has been that of the lesions which lie above the umbilicus or the cleaner zone of the abdominal cavity. This is so in spite of the fact that the greatest number of preventable deaths still come from the surgery of the acute infectious lesions of the abdominal cavity. If we eliminate malignancy as a cause of mortality from the lesions of the upper abdomen on account of the difficulty of early diagnosis which makes it less a human error, then again is the death rate from the surgery of the infectious lesions of the lower abdominal cavity much multiplied as deaths from human errors in comparison with the surgery of the upper abdomen. I have heard many prominent teachers say there has been a marked loss of interest in the peritonitic lesions since the death of Joseph Price, and I recall hearing Dr. J. B. Murphy say, "Price has taught more in the peritonitic lesions than have all of us." So it is my object to interpret in this paper some of the surgical principles involved in the management of a peritonitis which were typical of this great master's work and which are in flaming contrast to the popular views of this day. I feel it is the proper hour to invite renewed discussion in this question of peritonitis, as it is my opinion its surgical pathology will have to be rewritten. It is my experience that there is by far a greater disparity between privileges and results in the peritonitic lesions than is seen in any other surgical lesion. I mean to state that there is a larger per cent of deaths due to human errors in the pus forming lesions

of the abdominal cavity than in any other field. One can take in detail the fatal cases from peritonitis and point out with almost unerring precision the cause of death as a human error of certainly over ninety-five per cent of the patients; indeed in the Joseph Price Hospital during the last twenty years even a greater per cent can be placed at the door of human error, when contrasted with privileged surgical results. This cannot be said of malignant lesions with such forceful denunciation, with the possible exception of malignancy of the breast and uterus, which admit of amputation surgery, and where, I believe, ninety-five per cent of the mortality is due to human error. To admit that ninety-five per cent of the deaths of any lesion in one's professional experience,—and I make this admission,—are due to human error, is an obligation to give any enlightenment one may have on this subject. I have written a number of papers on peritonitis, and I can see from the discussion which follows that my message has not been understood. I have given this subject a great deal of thought in my effort to understand just why men make the discussion they do following any plea I may have made, and I have come to the conclusion that, while we are viewing the surgical pathology of peritonitis from the standpoint of the physical surgical problem, the civil engineering of the mass pathology of the condition, the popular profession has been looking upon the superficial topography of the peritonitic lesion *per se*; it has had surface in mind, whereas we have had continuity of mass, and, therefore, he has surface infection, viz., peritonitis, as his problem of surgical pathology, whereas we have continuity of mass, viz., adhesions, infected omentum, abscess cavities, partial and complete bowel obstructions, as our problem of surgical pathology. Now then if one grasps this idea of the two views, one superficial or peritonitic and the other the mass pathology as described, you can easily see why the

From the Clinic of the Joseph Price Hospital

surgical working factors of the two views must differ. The surgeon who has the peritonitis, and peritonitis only, as his idea of the surgical pathology of the condition will only take those surgical steps which have to do with the superficial or surface pathology, while the surgeon who assumes his surgical duty is to deal with the mass pathology, has as his working factors the solution of the continuity of the mass pathology. In this sense I have outlined the differences between the physiological and the pathological surgeons. The physiological surgeon takes into account the peritonitis or the pathology of an endothelial membrane, whereas the pathological surgeon attacks the pathological area as a diffuse mass of pathology composed of infected tissues throughout, abscess cavities, partial and complete bowel obstructions, etc., and each pathological structure or condition lends its particular source of infection plus the peritonitis; this analysis of the two opposing views outlines the surgical procedures which indicate the surgical step of the physiological and the pathological surgeons.

At the dawn of the physiological era of abdominal surgery, Metchnikoff, Ehrlich and Wright had come forth with their phagocytic theory of cellular pathology and physiology, so the physiological surgeon endorsed their cellular theory of protection and adopted the same as one of his working factors in this way, that the peritonitic abdomen should be left to its natural forces of defense of which the phagocyte was one, and, therefore, the surgeon should do as little as possible in the way of surgical manipulation so as not to interfere with the cellular action of the phagocyte. I have always felt that this was a very erroneous line of reasoning, as those distinguished physiologists and pathologists did not intend that their phagocyte theory should in any particular conflict with the surgical treatment of peritonitis, and that these great scientists had illuminated our physiology and in no way had dictated the surgical treatment of peritonitis was enlighten-

It was at about this date that we were

taught that the lymphatic system of the upper abdomen was more fertile in absorption than the lower and thus the Fowler position was brought into popular use in the treatment of the infectious lesions of the abdominal cavity; and again do I feel that our physiology was more illuminated than the surgical treatment of peritonitis was enlightened. Just as these principles which modified the work of the more radical surgery of peritonitis were adopted, we began to see the demerits which must always come from lack of thorough work, and nowhere in the surgical field would such become more conspicuous than in the urgent peritonitic lesions.

This era which marked the birth of the physiological surgeon in the treatment of peritonitis in the perforative lesions of the abdominal cavity occurred during the formative period of my association with the late Dr. Price, who, as has been said, was probably the greatest teacher in America of radical work in the peritonitic lesions; so the conflict was brought forcibly to me and had much to do with my present views. One of the earliest and most valuable lessons I received was that the radical surgery of Price was almost entirely void of post-operative complications, such as post-operative bowel obstructions, formation of secondary or distal abscesses, multiple operations, etc., which later in my life I have learned was due to the fact that his radical surgery had relieved the partial bowel obstruction incident to the peritonitis, so the same did not occur as a complete post-operative bowel obstruction. Again, that continued infection did not occur from distal abscesses as his radical surgery had reached this complication at his primary operation and had drained the same; and further, that multiple operations on the same patient were quite unknown, and that again this too was due to the fact that through his radical surgery he had uniformly removed the primary source of the infection at the first operation; for instance, the patient with a peritonitis from a ruptured appendix and the appendix not removed at first operation on account of fear of

spreading peritonitis, must often return if she lives, for other operation; this I never saw in my eleven years association with Dr. Price.

Realizing that this radical toilet had been condemned by popular teaching (and yet it was my observation that the radical work of Price in the peritonitic abdomen was unexcelled and was practically void of post-operative complications), I had this conclusion forced upon me, the conclusion which is a fact as far as my experience goes; namely, that the surgical treatment of the peritonitic abdomen is drainage, and that Price's conception of drainage was based upon the mass pathology of the peritonitic abdomen to which I referred at the beginning of the article; whereas the physiological surgeon had in mind those factors which concern the superficial peritonitic membrane and therefore the entire surgical effort of the physiological surgeon was anti-peritonitic and was not concerned with the mass pathology, bowel obstruction, distal abscess, mass tissue infection, etc.

Price basing his views upon the necessity of drainage of the peritonitic abdomen did not have in view simply drainage of the infected peritoneum but knew that the mass pathology must be dealt with and realized that every gangrenous structure removed was drainage, every adhesion released was drainage, every distal abscess cavity must be drained, each bowel obstruction released was drainage and the very foundation of drainage was removal of the primary source of the peritonitis.

We must ever keep in mind in our discussions of the peritonitic abdomen that one of the greatest functions of drainage is the release of intra-abdominal tension, as tension upon the parietal and visceral peritoneum early destroy the resistance of this membrane to infection and thus predispose to the absorption of infected fluid. From an analysis of the radical work of Dr. Price and from my own experience, I wrote a paper in 1910 published in the journal of Surgery, Gynecology and Obstetrics, in which I took the position that it was not the peritonitis that gave

the patient the final and fatal dose of toxins but that it was bowel obstruction that proved fatal; and furthermore, were it not for the bowel obstruction which was superimposed upon the peritonitis the patient would often win the fight, therefore the drainage of the peritonitic abdomen demanded release of all partial or complete bowel obstruction and that drainage of the mucous membrane of any obstructed bowel was as urgent a condition for drainage as the endothelial peritonitic surface. I also feel the obstructed bowel must be released during the operation not only on account of the absorption which takes place from the mucous membrane but intra-abdominal tension must be released in order to protect the serous membrane from injury due to hyperintra-abdominal tension to which I above referred.

It must be ever kept in mind that all drainage is in a sense, release of tension and thereby decreases absorption, as pus not under tension is little absorbed. When we realize that practically all intra-abdominal lesions which may lead to a peritonitis are primarily mucous membrane in origin, we should have forced upon us the great necessity of drainage of the mucous membrane of the obstructed bowel.

If the peritonitis is due to a perforated appendix, there exists a local virulent point of infection in the mucous membrane of the appendix and there is therefore an urgent need for release of any bowel obstruction in order that the distended bowel may be drained by the re-establishment of its normal peristalsis, which is the best of intra-abdominal drainage. If one reviews those types of peritonitis, which might be said (for the want of a better name) to be of constitutional origin, or possibly they had better be referred to as that type of peritonitis in which there had been no local point of infection of known origin such as the so-called pneumococcus peritonitis or those varieties of intra-abdominal infections we saw during the grip or flu epidemics, it was our experience that these patients will recover without surgery even though we had

evidences of extensive peritoneal irritation for a good length of time. It is my opinion that they recover without surgery for the reason there had been no virulent point of infection in the mucous membrane of the bowel and therefore the intra-intestinal toxemia has not been as fatal as that due to the ruptured appendix where we have a most virulent point of infection of the mucous membrane. I take it this further goes to prove, that it is not the peritonitis which is the final and fatal dose of toxins but more often the infection from the mucous membrane of the obstructed bowel.

In previous publications I have referred to the fact that those forms of intra-abdominal infection which are least peritonitic have the highest mortality. All varieties of puerperal infection when they involve the peritoneum, are of this type and are most dreaded. All the retro-peritoneal infections such as that from the truly retrocecal perforated appendix are of the highest mortality and may be fatal without any evidence of involving the peritoneum; and so may we go on and point out all of those types of intra-abdominal infection which are little peritonitic but have a very high mortality.

So it was along this line of reasoning that we were forced to accept the idea that the peritonitis was in a sense a physiological process but endangered the life on account of the complications which were superimposed upon the peritonitis such as retro-peritoneal infection, distal abscesses, tissue infection in mass and the partial or complete bowel obstruction, and it was to combat these complications of the peritonitis that our views of the surgical pathology of the condition have been worked out and which necessitated the radical steps of the pathological surgeon. We are much stimulated by a recent paper on peritonitis published in the *British Journal of Surgery* by Mr. Hendley, as his Hunterian lecture before the Royal College of Surgeons of England, in which publication Mr. Hendley takes the stand that it is not peritonitis which kills but the bowel obstruction; such had been my

contention in the paper published on peritonitis in 1910.

The physiological surgeon basing his working factors on anti-peritoneal absorption only, is not permitted to remove the perforated appendix if complicated by a peritonitis, as under no circumstances does his teaching permit him to disturb adhesions and therefore gangrenous structures, distal abscesses, bowel obstructions, etc., are ignored. His cramped toilet does not permit him to drain with other means than minor or tubal drainage; his patient is put in the Fowler position and salt solution given by the bowel; or again, if the peritonitis is diffuse or general (relative) the patient is not even operated upon but is placed in the Fowler position and a watchful waiting plan is carried out with the idea that the patient is to be operated during a future quiescent stage if he or she lives to that stage. I regret to say this is too much the teaching of our schools. It was very easy for us to early discredit this watchful waiting plan which had been determined upon on account of the supposed diffuse peritonitis of appendical origin which the physiological surgeon had diagnosed from the general distention and tenderness of the patient's abdomen, for this reason: early in my association with Dr. Price we were in the habit of opening these supposed diffuse or generally peritonitic patients in the midline with the idea of making a more complete toilet in the peritonitic abdomen, but we found in over ninety per cent of the cases that our midline incision had entered a clean peritoneal cavity and that, although the patient had general distention and tenderness, there was only a local peritonitic involvement in the region of the cecum and last few inches of the ileum, the general distention and tenderness being due to the paresis of the last few inches or foot of the peritonitic ileum. The physiological surgeon therefore had been in error in his assumption as to the extent of the pathological condition and had unwittingly been reporting cases as being operated in a later or quiescent stage as recoveries from a diffuse peritonitis, whereas they never had

been anything but a very local involvement of the peritoneum. The physiological surgeon not being permitted to break adhesions and explore the peritonitic abdomen, has never come into possession of these facts and has thus continued to advise the patient with a very local peritonitis to wait for the subsidence of a supposed diffuse involvement of the peritoneum. The results of such teaching must be apparent, it means in a large per cent of cases a greater involvement of the peritoneum in the septic process which may continue as a peritonitis, and he does not accomplish anything in these conditions which are local and remain local as above described. One of the greatest calamities of this position of the physiological surgeon is, that his watchful waiting moves all intra-abdominal lesions toward a later operative hour with, of course, dire results. We have for years realized that the very high mortality in the septic lesions of the abdominal cavity (and it is several times what it should be) must prevail if the present day teaching is continued; and that any attempt to classify the peritonitic abdomen into operative and non-operative stages, will always fail for the reason already cited, as signs and symptoms as to the extent of the peritoneum involved are not proportionate to the underlying pathological condition. This is our reason for taking the position that all peritonitic conditions due to perforated lesions should be operated at first hour possible irrespective of the extent of the peritoneum involved. This teaching will move all cases toward an earlier operative hour as it makes an example of the late cases which will tend toward earlier work next time. We can never unite the profession on the indefinite working factors of the physiological surgeon, such as he may or may not remove the appendix, he may or he may not operate on the peritonitic patient, depending upon the stage of the condition, etc. His views mean multiple operations, more peritonitis and numerous post-operative complications, and throws the general profession into the insanity of uncertainty. Knowing that those cases which seem

to show a marked peritonitis evidenced by a great quantity of exudate with an extensive involvement of the peritoneum were very good risks and had a low mortality as compared with the patient who had less marked peritoneal irritation and had a very high mortality, we never adopted the Fowler position. We accepted the view that we must treat the complications of the peritonitis such as bowel obstruction, and that the condition was fatal in a large per cent of cases before the peritoneum of the upper abdomen was involved by continuity of extension from the lower abdomen which is the site of the greatest per cent of infected cases. It has been our contention and our surgery proves this to be so, that very little absorption takes place from the peritonitic peritoneum, and we have proven to our satisfaction the peritonitic area can be handled with less degree of surgical shock than the normal peritoneum, so that a complete toilet of the peritonitic abdomen cannot only be done but must be done in order to release the partial or complete bowel obstruction, etc. It must be remembered that the partial bowel obstruction which is permitted to exist from the time of the first operation is to become the post-operative bowel obstruction in a great number of cases. We, further, did not adopt the Fowler position as the badly infected patients should be placed in that position which best takes care of the heart, which is the recumbent attitude of flexion and rest. If the incision has been made in the appendical region and the drained patient is placed well over on the right side, half way between a right-sided and abdominal position, it can be seen that the pelvis will empty; whereas in the Fowler position it remains a basin six inches deep which is not properly drained. We are quite positive the physiological surgeon is not obtaining the drainage from the Fowler position he expects. If the Fowler position so much influences the location of the pus or infected fluids, why do we not always have the abscess or the accumulated fluid from a ruptured appendix in the pelvis instead of finding the accumulation of pus in the region of the appen-

dix, whether it is in the ileo-cecal fossa, retro-cecal or high up toward the right kidney? The location of the appendix determines the location of the abscess and gravity has little to do with it in the peritonitic abdomen. If the appendix extends over the ileo-pectineal line and perforates, then will the pelvis contain the abscess and not otherwise, except where the condition has become general; then of course the infected fluids may be found in the pelvis, but gravity has had little to do with it. We feel the difference in fertility of lymphatic absorption of the upper and lower abdominal cavities is more a physiological fact than it is of material consequence in the treatment of a peritonitic patient; and we are further of the opinion that gravity little influences the spread of peritonitis as well as little influences proper drainage, and that all drainage is very local after the first ten hours. If the literature of the last fifteen years is reviewed it can be seen as the physiological surgeon's teachings influenced the profession against the more radical surgical treatment of the peritonitic abdomen, that most of the papers dealing with the subject have been written on its complications, such as post-operative bowel obstruction following the incomplete work of the primary operation, as where the appendix is not removed and partial bowel obstructions released; this was to be expected.

Many of these publications deal with ingenious methods of enterostomy or entero-colostomy or the mass of pathology remaining from the primary operation may be sidetracked by entero-enterostomy.

This literature has been necessitated on account of an inferior method of drainage and lack of thorough primary work.

I assumed in the beginning of my discussion that the treatment of peritonitis from a perforated lesion was drainage in the broadest sense, namely, that every adhesion broken was drainage, each gangrenous structure removed is drainage, each distal abscess explored is drainage, each partial or complete bowel

obstruction released is drainage and that the very foundation of drainage was removal of the distal infecting source, and that all of these steps are necessary and essential factors in the release of intra-abdominal tension which has all to do with absorption both from the mucous membrane of the intestinal system and the visceral and parietal peritoneum. Drainage is none less than this and the treatment of peritonitis of perforative origin is drainage. Under no circumstances in dealing with a peritonitic and distended bowel, should such bowel be returned into the abdominal cavity. We often make two or three punctures of such bowel and drain it of its infected fluids and gas. Early in my association with Dr. Price I began to see just why he could do this extensive toilet of the peritonitic abdomen with most brilliant results and why many others failed, and my message is this: that no operator can deal as radically with a peritonitis as did Dr. Price and drain with anything other than extensive system of gauze such as his famous cofferdam; and further, that this cofferdam had its chief virtue not so much as a drain per se, but that its greatest function was a mechanical one in that it elevated the peritonitic and half-paralyzed intestine and kept the bowel from prolapsing into the most infected and dependent areas and producing a post-operative bowel obstruction. The release of the bowel obstruction and the elevation by the cofferdam of the edematous and peritonitic bowel at the primary operation so improves the circulation of the intestine that one is early rewarded by a renewal of peristalsis, and thus the early drainage of the mucous membrane of the bowel and release of distention and intra-abdominal tension.

This cofferdam of gauze cannot be used as a drain until a radical toilet is done, such as removing the source of the peritonitis, breaking adhesions, releasing bowel obstruction, etc. To place a cofferdam of gauze on top of a pelvic abscess with its usual partial or complete obstructions is, of course, rude surgery, as the pelvis must be emptied

of all movable contents and the viscera must be kept out of the pelvis as the cofferdam is inserted. This extensive system of drainage is placed just as the civil engineer would construct a dam, it is in no sense a pack. Each single piece of folded gauze is passed by a long dressing forceps to the bottom of the pelvis, as the viscera are held from the pelvis by the back of the fingers of the left hand. Each piece is placed parallel and against the last just as a series of piles might be driven until the entire pelvis is filled, and if the appendix is the offending organ and there has been an extension of infection high up toward the right kidney, so is the cofferdam of gauze extended from the pelvis up under the head of the cecum toward the right kidney. The cofferdam is always a single solid wall, never two or more columns of drain. We never insert a drain to any clean dependent point of the abdomen in the peritonitic patient with the idea that pus may later accumulate there on account of its dependent position; this would only be operative infection. It can be seen that a large area of peritonitic bowel will come into direct contact with this great surface of drainage and be best drained. The patient is put to bed, turned

in the right prone position, the hip is pulled well over toward the side of the bed which throws the patient midway between a right-sided and abdominal position; this permits the pelvis to empty. The patient is kept in such position for ten or twelve hours following the operation. I feel about all the drainage which may be favored by position will be obtained during these ten or twelve hours as the drain is early walled off from the general abdominal cavity. The drain is removed at the end of six days and no secondary drain ever inserted and no flushing of the incision is ever done though it be full of pus or fecal matter. We simply cleanse the skin in the region of the incision and strap the wound as tightly as possible, and the incision will heal in one-third the time when left alone as compared with meddlesome toilet of the incision.

As the surgical pathology of peritonitis is re-written from a more accurate knowledge of the part played by the complications of the condition, bowel obstruction, distal abscess, etc., the only satisfactory treatment of these post-operative complications will be found to be prophylactic by thorough primary surgery with extensive system of gauze drainage.

FRACTURE OF THE CLAVICLE AND SCAPULA

J. S. GAUL, M.D., Charlotte

Fracture of the clavicle is of common occurrence, and of such fractures, more than one-third occur in children. Trauma is the etiologic factor in most instances, acting through indirect violence, transmitted through the extended hand and the arm to the shoulder girdle. This is more particularly true in children, they being subject to many falls. Fractures resulting from direct trauma are usually sustained by those in the vocations requiring manual labor.

The fracture occurs most often at the middle third of the bone, the outer fragment being displaced downward and inward, following the shoulder in its descent after its support has been removed. The clavicular fibres of the

sterno-cleido-mastoid muscle are free to exert their full power and in their contraction pull the inner fragment upward and inward. Such position of the fragments is uncomfortable to the patient and, in his efforts to overcome it, he assumes a characteristic attitude. He leans forward, inclines the head to the affected side, and supports the elbow with the hand of the sound side. The distance between the sternal notch and the tuberosity of the humerus is shorter on the side with the fracture.

The fracture may be located within the confines of the coraco-clavicular ligament, in which event there will be but slight, if any, displacement of the fragments. In such cases the diagnosis is

made on the history, appearance of ecchymosis, point of tenderness and the x-ray picture.

The fracture in children may be the greenstick or incomplete type. In these cases the child has pain, inability to raise the arm and some bowing of the clavicle. Epiphyseal separation may rarely occur at the sternal end of the bone.

Practically all cases of fracture of the clavicle are ambulatory, so the treatment in recumbency is reserved for those made bedfast by some other complication. In these cases the patient should be on a firm mattress, and, preferably, there should be boards placed the length of the bed between the mattress and the springs. A small pillow is placed beneath the shoulders and back, the force of gravity then being exerted on the arms practically reduces the fracture. The elbow is best held firmly against the chest, the skin surfaces being separated by gauze to absorb the moisture and prevent excoriation of the skin.

In the ambulatory treatment the Sayre dressing, barrel stave splint, the so-called T splint, or any of the various back and shoulder braces may be used. In my experience the patients have complained most often of the T splint, then the barrel-stave splint, in this order of frequency. The shoulder braces have the advantage that the patient has free use of both arms and hands.

The Sayre dressing requires care in the reduction of the fracture and in the application of the dressing, else an overriding of the fragments with an unsightly deformity will result. The deformity is of importance only from an esthetic standpoint and will not materially lessen function. While not causing complaint from the males, this is of considerable moment to the female.

In applying the Sayre dressing three strips of adhesive are used. The skin surfaces are to be kept separated by gauze pads. In children excoriation of the skin must be avoided, and it is advisable to allow but a portion of the strip to contact with the skin, a gauze bandage being placed along the edges

of the plaster to allow only the mid section to adhere to the skin.

The first strip should be long enough to pass around the arm of the affected side, across the back and around the chest under, but not adherent to, the other arm. In applying this strip the skin of the arm on the affected side is protected from the adhesive, usually best accomplished by placing a short strip on the portion surrounding the arm, the adhesive surfaces being in contact. The arm is carried well back until the fracture is reduced, and maintained there by the adhesive strip then being applied to the back and chest.

The second strip of adhesive is applied, starting from the sound shoulder, passing down across the back, over the point of the elbow, a hole having been cut for the tip of the olecranon process, then passed up over the flexed forearm to the starting point. As this strip is applied the shoulder should be well pushed up, and care should be taken to see that the strip when applied maintains it there.

The third strip merely passes completely around the chest, back and the arm of the affected side. A Velpeau bandage may then be applied over the entire dressing and will afford much relief.

In the average case little difficulty should be encountered and a good functional result will be obtained. Occasionally a distressing complication will be seen, such as injury to nerve structure or to the subclavian vessels, nonunion from interposition of tissue, and, in case involving the outer third of the clavicle, an associated bursitis. Where cases with nerve or blood vessel injury or with nonunion are encountered, operative intervention is indicated. Usually a simple incision down to the fragments permits of reposition and repair of the involved structures. Simple suture of the fragments may be indicated, only absorbable material being used.

Fractures of the scapula are not frequently seen and when encountered may be associated with some other complication, the most frequent being fracture of the head or neck of the humerus,

or dislocation of the head of that bone. This is true because most fractures of the scapula are sustained by traumatic violence such as incurred by a falling beam or other object striking the shoulder, the traumatic force imposing on other structures additional pathology. In like manner the clavicle may be fractured in conjunction with the scapula.

The fracture may involve the body, spine, coracoid or acromial process, or the glenoid neck.

In simple fractures of the body or vertebral portion of the spinous process there may be little or no displacement of the fragments because of the protection afforded by the encasement by the muscles on the ventral and dorsal aspects of the scapula.

Fracture of the body is usually transversely across the subspinous fossa. It is usually incurred when the arms are firmly fixed. There is pain on attempting to lift the arm to the horizontal position, for in order to do this the patient must maintain the acromion as a fixed point. This is accomplished by contraction of the rhomboids, pectoralis minor, teres minor and major, and trapezius muscles. Hence motion is forced to occur at the fracture line.

The acromion process when fractured may be displaced downward either by the fracturing force or by the weight of the arm exerted through the deltoid muscle. In all injuries about the shoulder joint this displacement should be looked for and if found corrected, otherwise there will be interference with abduction of the arm, more or less serious depending on the degree of depression of the fragment.

In this fracture there is slight flattening of the tip of the shoulder.

Recognition of fracture of the coracoid process with much displacement is important because it is to the tip of this process that the pectoralis minor is inserted and exerts through it its action in contracting to fix the scapula in all abducting movements of the arm. This function should be preserved.

In fracture of the glenoid the displacement is downward, partly from

the fracturing force but mostly from the weight of the arm. From a practical standpoint the fracture line extends from the supraspinous fossa to the axillary border. When the fragment drops away from the acromion the deltoid muscle is put on the stretch and the shoulder appears flattened. There is a depression beneath the acromion and the arm is longer on the injured side. These symptoms will not appear if the coraco-acromial and coracoclavicular ligaments are intact, but they are usually torn. It will be necessary to differentiate this lesion from subglenoid dislocation of the head of the humerus, since the symptoms are common to both conditions. The presence of crepitation in the fracture and the ready disappearance of the deformity when the arm is pushed up, together with the ease with which the hand of the affected side can be placed on the sound shoulder will serve to differentiate the two conditions.

The treatment of the various fractures of the bone requires very little apparatus. In the case of those of the body, the coracoid process and of the spinous process, firm strapping of the arm to the side with firm strapping of the scapula in place will result in good function.

In the cases of fracture of the acromial process and of the surgical neck, i. e., separation of the glenoid, I prefer treatment with the arm in the abducted position. While it is true that these cases may be treated by holding the arm to the side, I believe it wiser to anticipate probable bony or fibrous ankylosis in the shoulder joint and to have the arm in the most favorable position should this unhappy complication ensue.

Early baking and massage are advisable in these fractures as in all fractures about a joint. I employ early motion in the fractures that I treat, and am particular to use it in fractures about joints or in those cases where there is a probability of compromise of function. The function of the upper extremity is extremely important particularly to those whose maintenance

depends upon manual labor. I feel that the maximum function will be preserved in the cases where early motion is started. I am sensible of the great danger involved in starting early motion and feel that a word of warning is imperative. If early motion is to be

practiced it should be done only under most rigid and competent supervision. Practically this can only be done when the surgeon is willing to take down the dressings, remove the apparatus and make the motions himself.

15 West Seventh Street.

THE INCIDENCE OF A POSITIVE WASSERMANN REACTION AT THE CROWELL CLINIC

L. C. TODD, M.D., Charlotte

Recently we took opportunity to review our laboratory records of all complement fixation tests for syphilis performed since the war; i. e.—during the past seven years. We found information in this data that was so interesting to us that we presumed that it might be of more general interest and for this reason decided to present a summary of these statistics before this society.

During this period of time from January first, 1919, to January first, 1926, there were performed a total of 13,332 Wassermann reactions with the sera of 11,555 patients. During the years 1919, 1920 and 1921 our laboratory was handling the serological work for the free government clinic and during this time the sera from 2,766 of these patients were examined leaving a balance of 8,789 private patients of the Clinic included in our reports.

In order for these statistics to present the true conditions and serve their full purpose for information, it was decided to separate the races and the sexes in order to arrive at a proper significance of the percentage in each group presenting a positive serological finding. Since the government venereal clinic specimens were given us largely by number, it was impossible to separate these into the sex and race groups and they are reported in Table 1 only on the basis of being serologically positive or negative.

Of our private patients, our laboratory records are inadequate to separate the races in 1919 and we have made no attempt to separate the patients accord-

ing to whether they were in the Urological or Dermatological Departments (See Table 2). In the 1920 report we are able to accurately separate the races and sexes but have made no attempt to divide the patients according to departments. (See Table 3). The larger percentage of positive Wassermann reactions in the private patients during 1920 as compared with the report covering the subsequent five years may be explained by the fact that the two department groups were not kept separate in the report for this year and also by the fact that many indigent patients were still being cared for by the clinic as a heritage from the conditions obtaining here during and shortly after the war. As the free government venereal clinic became active, this organization began to take care of an increasing number of this class of patients.

In the report covering the past five years, we have made a complete division into the various groups as well as by departments and are able to indicate accurately the number of cases showing a positive Wassermann reaction in any one of the race, sex or department subgroups of any one of these five years.

These statistics are presented in tabular form in Table 4.

Comment

The majority of patients having active syphilitic lesions have a fairly definite idea as to what is wrong with them or at least they are convinced that they belong in the skin department and, for that reason, they usually report to or are referred to the Dermatological Department at the time of their entry. Furthermore, the routine serological examination is

*Read before Mecklenburg County Medical Society October 20, 1925. The statistics having since been brought up to January 1, 1926.

performed only on those who remain as patients of the Urological Department—none of whom are regarded as syphilitic at the time of the examination. This division of the patients into departments accounts for the relatively high positive test in the former department and the surprisingly low positive findings in the latter department.

We feel that the figures presented from the Urological Department for the past five years give a fair measure of the expectancy of a positive Wassermann reaction in the class of patients in this department when the above mentioned method of separation of patients is considered. We attempt to test all patients entering this department and all cases examined are included in this report.

Those in the Dermatological Department are selected for blood examination, and only 23 per cent of the patients who have entered this department during the past five years have been examined serologically. It is obviously impractical to obtain a Wassermann test on those patients entering this department for the removal of a wart or mole or for the treatment of some other minor dermatological condition.

We have added and classified in this group, all patients or blood specimens referred by outside physicians for blood examination alone. Under these conditions, blood specimens are usually collected from four patients suspected of having syphilis and the positive Wassermann incidence is disproportionately high. These facts should be borne in mind in passing judgment upon the figures given. Also, one may remember, especially, the considerable number of patients who may have entered the Dermatological Department with primary syphilis, proven by the dark-field examination, but in whom the Wassermann test was still negative. The incidence of syphilis in this group of patients is much higher than the serological test indicates. It is a noteworthy fact that, due probably to the educational efforts of the military authorities during the recent war and to the more recent instruction given the general

public by the Public Health Service, the patient with early syphilis is reporting much more promptly to his physician for treatment.

Our method has been so constant during this five year period that our figures for this time are comparable throughout. We have used several cross-checks, consisting of a fortified human heart antigen as well as Kolmer's standard antigen at incubator fixation; both of these antigens at ice box fixation and finally, during the past four years, the Kahn precipitation reaction as an additional check. Only definite reactions are reported. If for any reason a blood is found anti-complementary or, for some other reason it cannot be reported upon on one test, repeated tests are taken until a definite reaction is obtained and this reading only is used in the classification. Many retests, of course, have been made during the process of treatment but only the initial serological diagnosis is included in our tabulation.

Summary

Urological Department: We were somewhat surprised by the low incidence of a positive Wassermann reaction in testing all patients entering the Urologic service. It will be noted that of the white males there were during the past five years 157 out of 3301 or 4.8 per cent who were positive. While the incidence was as high as 6.2 per cent, it was 3.0 per cent during 1925. Of 599 white females there was a positive reaction in 3.9 per cent at one time occurring in as high a percentage as 7 per cent; was less than 2 per cent last year and this year appears as 3.8 per cent. We might offer the following reasons in explanation of the low incidence in this department. First:—The high percentage of native Anglo-Saxon stock in the population of this immediate territory. The last census shows that North Carolina has a trifle less than 0.4 per cent of her white population who are foreign-born. Second: The method by which patients are originally entered in the various departments. Most syphilitic patients, aware of or suspecting their condition, report to or

are referred directly to the Dermatological Department. The routine test is performed only on those patients of the Urological Department after this method of selection has been in effect.

The much smaller number of colored patients given in the male group of 245, a positive reaction in 30.2 per cent, while of 59 females there were 20.3 per cent positive.

Dermatological Department: Out of the 1508 white male patients examined serologically during the past five years 427 or 28.3 per cent showed a positive Wassermann. Of the 472 white females 135 or 28.6 per cent were positive. The smaller number of colored patients showed a positive incidence of 54.4 per cent in the male group of 103 and a 57.7 per cent positive incidence in the female group of 78. In this department the patients are selected for serological examination and only about one-fourth are

tested. This accounts for the relatively large number of positive reactions in this group.

These figures are presented with a view of attempting to answer the frequent questions as to the number of Wassermann positive cases seen in our clientele in the several race and sex groups. We attempted this analysis also to determine to just what extent a routine Wassermann test was of value in caring for the type of patients entering our Clinic. While it must not be forgotten that the incidence of syphilis in this group of patients is greater than a positive Wassermann, which is true in any location and by any technique, comparison of our serological findings with similar reports from other clinics and hospitals indicates that the incidence of syphilis in this immediate locality is much lower than is usually reputed.

Table One

Summary of Patients in Government Clinic

	1919	1920	1921	Total	%	
Negative -----	758	686	287	1731	62.58%	Negative
Positive -----	481	412	142	1035	37.42%	Positive
Totals -----	1239	1098	429	2766		

Table Two

Private Patients 1919

Male -----	860	Negative	678	
		Positive	182	21.2% +
Female -----	171	Negative	129	
		Positive	42	24.6% +
Total -----	1031			

Table Three

Private Patients 1920

White				Colored			
Male ---1092	Negative	945		Male---- 46	Negative	25	
	Positive	147	13.5% +		Positive	21	45.7% +
Female - 196	Negative	156		Female 25	Negative	15	
	Positive	40	20.4% +		Positive	10	40.0% +

Table Four

Urology Department			1921	1922	1923	1924	1925	Totals	
White Male (3301)	Neg.		620	665	548	696	615	3144	
	Pos.		41	55	28	15	18	157	4.8% +
Female (623)	Neg.		96	104	139	155	105	599	
	Pos.		8	5	4	3	4	24	3.9% +
Colored Male (245)	Neg.		7	37	33	54	40	171	
	Pos.		4	23	13	18	16	74	30.2% +
Female (59)	Neg.		1	8	15	13	10	47	
	Pos.		3	1	2	5	1	12	20.3% +
Totals			780	898	782	959	809	4228	

Dermatology Department (Selected Examination)			1921	1922	1923	1924	1925	Totals	
White Male (1508)	Neg.		223	231	281	153	193	1081	
	Pos.		110	122	86	69	40	427	33.3% +
Female (472)	Neg.		67	86	52	61	71	337	
	Pos.		34	40	25	18	18	135	28.6% +
Colored Male (103)	Neg.		5	11	16	7	8	47	
	Pos.		8	23	13	8	4	56	54.4% +
Female (78)	Neg.		4	14	7	3	5	33	
	Pos.		5	10	17	8	5	45	57.7% +
Totals			456	537	497	327	344	2161	
Grand Total			1236	1435	1279	1286	1153	6389	

AN ATTEMPT TO FUSE THE HIP JOINT FOR TUBERCULOSIS:

A Report of the End Result of a Case

ALONZO MYERS, M.D., F.A.C.S., Charlotte

The purpose in presenting this report is not alone to call attention to the difficulties in obtaining a solid bony fusion in the presence of a destructive infection and reduced vitality of the head and neck of the femur and the acetabulum, but possibly to stimulate a deeper study of the methods for treating tuberculosis of the hip joint. It is my observation at the present time that this condition is the most distressing, difficult, and unsatisfactory problem we have to deal with. Complications are numerous; recurrence is frequent, sometimes even after long periods of quiescence. One may never feel safe with a tuberculous hip joint except in rare cases where complete arthrodesis has taken place.

In my experience and observation the various operations suggested to obtain a fusion of the hip joint have been unsatisfactory in the majority of cases as evidenced by the case reports from various orthopedic clinics. In most instances the head of the femur has been dislocated and denuded of its cartilage, the acetabulum thoroughly denuded of its cartilage, and in some cases large bone flaps turned down from the side of the ilium and wedged in between the head of the femur and acetabulum or neck of the femur and ilium; they have either been absorbed or failed to produce sufficient callus to give bony union.

To be successful any operation for fixing the hip joint in tuberculosis must produce a bony fixation. Fibrous union, however firm it may be, is not sufficient because absolute immobilization is necessary. So much strain is placed upon the hip joint that any fibrous union is certain to stretch sooner or later.

Smith Peterson of Boston, in a personal communication, reports three successful fusions by dislocating the head and denuding it and the acetabulum of their cartilage and diseased bone, and he has had marked success by this same method in correcting the deformity in several cases that had arthrodesis in a poor functional position. In a more

recent letter he reports that in the first three cases the symptoms have recurred and that the patients have been readmitted to the hospital for a second operation.

In a recent search of the literature I found only three men who report successful fusions. Haas of Leipzig reports—"Transplant of the Trochanter"—three cases with a bony ankylosis in two, fibrosis in one; Kappieg, Vienna—"Tibial Transplant from the Trochanter to Crest of the Ilium"—gives fourteen cases treated successfully. H. W. Spiers reports thirty-four operative cases of hypertrophic arthritis and traumatic hips, twenty-five of which he was able to trace. There was firm union in seventeen, questionable in three, non-union in five. In the same paper he states that abduction was retained in only three of the seventeen firm union cases, which would lead one to assume that in fourteen the union was not bony in character. Dr. Benj. P. Farrell, under whom I had the pleasure of serving as Resident Surgeon a period of five years at the New York Orthopaedic Hospital, reports ten operative cases, all of which were complete failures excepting one or two.

The hesitancy of the profession as a whole in reporting results, and my own experience, leads to the conclusion that up to the present time operation for bony arthrodesis of the hip joint cannot be rated among the successful surgical procedures.

After a careful study of the problem we feel sure that an operative technique eliminating motion of the tubercular hip joint would, in selective cases, add very materially to our therapeutic armamentarium. It is essential that the operation shall be applicable to children, where the ossification of the femoral head and acetabulum are incomplete. The disease is more frequent in children than in adult life, and destruction is more rapid. Any type of operation dealing directly with the joint surface

and depending upon maintaining bony contact between head and acetabulum is thus excluded. It would seem that some method of extraarticular fixation offers the best hope of success, especially in children. Natural mobility of the part makes complete immobilization difficult and renders it almost impossible to maintain a sufficient amount of bony surface of head and acetabulum in contact to insure the necessary amount of callus production. The large amount of extravasated blood with the tendency to organize into fibrous tissue may be a factor also, and the fact of having present a destructive disease, lowered resistance, and poor vitality of the femoral head and acetabulum.

Dr. Hibbs of the New York Orthopaedic Hospital, in 1922, working independently of any knowledge of Haas's work, perfected a technique for extra-articular fusing of the hip joint by transposing the trochanter with its periosteum and muscle attachment undisturbed, so as to make contact above with the ilium and below with the femur, the limb in flexion and abduction. Six cases have been operated upon, but Dr. Hibbs says it is too early to make a report although they appear most promising.

In reviewing the literature for this paper I have found that Dr. Haas, of Leipzig, January 13, 1923, reported two successful cases and one fibrous, as above, done under similar technique. He cuts the great trochanter free, denuding the upper edge, and fitting this into a groove in the ilium with the leg in abduction, he sutures the trochanter in this position.

Case Report

Diagnosis: Tuberculosis of the hip joint. Duration of disease, 11 years. Age at time of operation—20 years. Under treatment by various doctors for 9 years. At time of operation very little motion in his hip. Preoperative roentgenogram showed acute disease of which had widely involved the acetabulum and destroyed all the head and part of the neck. About 20 degrees adduction deformity. Operation July, 1920; Smith-Peterson incision seven inches

parallel with femur from just back of anterior superior spine, five inches back along crest of ilium; gluteus medius and tensor fascia released subperiosteally far enough back to expose the superior anterior portion of the acetabulum.

A shelf of atrophied bone was found antero-superiorly along the rim of the acetabulum; fibrous tissue with caseous material intervened between the shelf and what remained of the neck of the femur. The shelf was of good bone as was also the cortex of the exposed part of the neck. A little of the latter was chiseled away for better exposure and to allow abduction and flexion. A piece of the cortex, one quarter inch wide and one inch long, was turned up and wedged between the shelf; by abduction the hip was brought in contact with the shelf.

Another bone pedicle was stripped from the side of the ilium above shelf and turned down to still further fill the space between the two bones. Wound closed: Plaster applied in position of 15 degrees flexion, 15 degrees abduction.

Plaster removed July, 1921. Very slight if any motion in hip. X-ray shows some calcification. Last note July, 1921; Flexion 20 degrees—abduction 10 degrees. Rotation 2-3 degrees. No pain. No spasm. Hip seems stable.

Have done one other case but it is too early to report results.

Conclusions

(1) Results obtained in the treatment of tubercular hip joint at the present time are the most unsatisfactory of all the problems with which the orthopedic surgeon has to deal.

(2) This is true because fixation of the joint is essential to cure. It cannot be accomplished by apparatus, and no operation has been devised as yet that will assure bony arthrodesis.

(3) The paucity of the literature on the subject, and the unsatisfactory results of the cases reported, are evidence of the lack of any successful operation for obtaining complete bony arthrodesis of the hip.

(4) In order to be successful the operation must assure complete arthrodesis and must be applicable to children.

(5) Causes of Failure: Quoting Dr. Ferrell, "Poor vitality and low resistance of the femoral head and acetabulum in the presence of a destructive disease. The difficulty in maintaining immobility, and in children incomplete os-

sification. Small amount of bone contact, with its tendency to organize into fibrous tissue, large amount of blood actually surrounding the bone fragments, and perhaps poor blood supply in the bone itself."

CASE REPORT DEMONSTRATING THE VALUE OF THE TUBAL PATENCY TEST

ROBERT THRIFT FERGUSON, M.D., Charlotte

Mrs. J. C. B., age 24, married 8 years. Came for relief of leucorrhea which had extended over a period of little more than 12 months.

Family History: Father died of Bright's and one brother died of infantile paralysis.

Past History: Menstrual: Begun at 13, always menstruated every 28 days. Flows about 7 days very freely and notices that the flow is excessive every other month. Passes no clots and has never had any dysmenorrhea.

Obstetrical History: No children. Had one spontaneous abortion 4 years ago. There was a normal convalescence following this. She has had no previous illness and no operations.

Veneral History: Claims that her husband has had a yellow urethral discharge for some time and she fears she has caught some disease from him.

Present History: Has had a yellow vaginal discharge for more than a year. Always has headache the day before periods but has had very little backache. No urinary symptoms.

Vaginal Examination: Normal perineum. Cervix enlarged to twice its normal size and very badly eroded with thick creamy pus pouring from os. Skene's and Bartholin's glands apparently normal. Uterus normal size and in first degree retroversion. There are no adhesions and the uterus is easily replaced. Both ovaries a little enlarged, especially the right. Tubes not definitely palpable.

Pathological Report: Smears and cultures from cervix and Skene's glands negative for gonococci, though the macroscopic picture was that of a chronic

gonorrheal infection. It is very hard to demonstrate the gonococcus in very old cases even with cultures and almost never with smears.

There was no abdominal tenderness or swelling and no gastro-intestinal or nervous symptoms.

Temperature 99 3-5; pulse 80; resp. 18; blood pressure 110 over 60; weight 108 pounds; tonsils and teeth good; leucocytes 9000; heart and lungs normal; urine negative both chemically and microscopically.

Tubal Patency Test at this time was negative on both sides at 200 mm. Hg. It is a well demonstrated fact that many cases who have non-patent tubes have no tenderness over them and no definite pathological or physiological change can be determined by palpation even in the most favorable subject for examination, therefore your physical examination may reveal no sign of pelvic trouble and it takes the patency test to demonstrate where the real cause of the physical non-function occurs, especially where the patient has been anxious to conceive and where some pathological process has deprived her of this privilege.

The patient was given local treatment over a period of four months after which time all leucorrhea disappeared and she was asked to return later for another patency test. This was made on August 20th, 1925, and both tubes were found to be patent at 80 mm. Hg. Vaginal examination at this time showed cervix to be normal with no discharge, and a normal pelvis with the exception of the right ovary, which was as large as a walnut, very soft and apparently cystic, this being nearly 12

months after the first examination.

The reason for presenting this case report is to impress upon you the fact that many tubes are closed during acute and subacute endocervicitis, and that tests made many months after treatment, and cure of the inflammatory condition, will prove the tubes to be patent.

I have had a number of cases of this character and experience has taught me that few cases of a well developed cervicitis, endocervicitis or vaginitis, regardless of the cause, whether streptococcic, staphylococcic or gonococcic can be cured in less than 6 months to a year.

FOCAL INFECTION FROM A DENTAL VIEWPOINT

D. B. MIZELL, D.D.S., Charlotte

A focus of infection may be defined as "A circumscribed area of tissue infected with microorganisms" (Billings).

Focal infection has come to be applied to a pathologic condition consisting of two parts; a tissue primarily infected, and a tissue which becomes infected secondarily as a sequel to establishment of the primary infection.

The theory that systemic diseases may be produced through a local infection is not new. Septicemia is a very good example. It is, however, more striking to note secondary systemic effects produced in the course of many infectious diseases.

Mental disturbance is a frequent accompaniment of febrile attacks. Ocular and aural symptoms are very often accompaniments of infections centering in nasal passages, as colds, etc. Headaches often occur in the course of acute disease. When we remove or rid a field of infection, the secondary effects usually subside in a very short time; although there are exceptions, when more or less permanent effects may result, especially in diseases such as meningitis, gonorrhea, etc.

Very often, primary infection produces no acute symptoms and may be overlooked for some time, which may be very difficult to locate. This, however, has no weight upon the theory of causal relationship of primary and secondary disease.

In order for metastatic disease to occur, injury to secondary tissue or systemic defense must be lowered before secondary disease can manifest itself. Failure to eliminate the primary focus has usually meant a recurrence of dis-

ease, or the establishment of a secondary focus. In order for secondary disease or infection to occur, we must have a primary focus of infection, injury to some tissue or tissues, and a lowering of the general systemic resistance. Drs. Stillman and McCall say the causative factors of primary foci of infection may be located in various parts of the body and classify them as follows:

1. Infections around teeth, gums, and maxilla
2. Infections of accessory nasal sinuses and mastoids
3. Infections of tonsils
4. Chronic diseases of pelvic organs
5. Chronic disease of the intestinal tract and its appendages, the gall bladder and appendix
6. Chronic secondary foci, which means those infected after the elimination of primary infection.

The field of focal infection for the dentist is limited to the maxillary regions, and when we have eliminated disease from these structures our responsibility is necessarily passed on to the physician; but we should be very sure of absence of infection within our jurisdiction. It is very unwise for the dentist to assume any responsibility, either in diagnosis or in treatment, except in his own field; but with his knowledge and qualifications, he may be able to render valuable assistance to the physician.

It must be remembered that the elimination of a primary focus, without secondary or general treatment, has frequently failed to give satisfactory results. I have known people who were supposedly suffering from focal infec-

tion, yet were not benefited by removal of teeth, tonsils, etc. One of our problems today is a sure test by which presence of focal infection in the body may be determined, and satisfactorily eliminated. (Part of above taken from Drs. Stillman and McCall).

The Effects of Pus.

It is no difficult matter to realize how in those cases of pyorrhea where pus is continually flowing into the mouth, it is ingested into the alimentary tract with the solids or liquids taken. Now, a complete analysis of this infectious matter would furnish us explanation of its detrimental influence. In brief, it may be said to contain pathogenic products of saphrophitic organisms in the form of alkaloidal-like substances, known as leucomaines and ptomaines. It is when this toxic mixture has irritated the mucuous mebrane of the entire digestive tract that we find the associated catarrhal afflictions, that, developing progressively, are termed, septic—gastritis, enteritis, and ileo-colitis, respectively. When these conditions have developed after a lapse of time, much impairment of the digestive powers is apparent and the general health suffers correspondingly. The purulent matter is in part absorbed into the portal system in the form of ptomaines, and carried to the liver where its harmful influences are for a time annulled by promoting rapid elimination from the body; but in some weak individuals, this is accomplished only for a time. The hepatic cells in some manner become temporarily incapacitated so that the poisonous elements are permitted to escape into the general circulation and work widespread harm. It is then we note the disturbances met with in the form of nephritis, diabetes, anemia, and incipient arterio-sclerosis.

While only problematical with me, it may be that the albuminuria met with occasionally, is due to the irritative effects of the ptomaine-like substances on the glomeruli or results from the increasing blood pressure. In any event, when by treatment, we have reduced the pyorrheal infection, a beneficial effect may be noted on a complicating diabetes,

and from the speedy relief given in these cases, I am inclined to the belief that sugar found in the urine of this class of patients is not so much an evidence of diabetes, but is a temporary glycosuria; but that it may develop into diabetes in time. I have no reason to doubt.

It is very hard to state all the systemic symptoms that are caused from gums infected with pyorrhea and abscessed teeth.

After pyorrhea and infected teeth and roots, I believe tonsils rank next among the causes of focal infection, and when I say this, I mean from the majority of cases.

Report of a few cases treated:

Case No. 1. Female, age 35. Swelling of finger joints. Rings had to be cut in order to remove. Soreness of knee joints, more severe in morning upon rising. X-ray showed alveolar absorption, pyorrhea and some discharge. Three teeth were extracted, others given proper treatment for pyorrhea. Condition subsided—patient in fine health now.

Case No. 2. Female, age 19. Student at college. Eyes began to give trouble, as though she was losing her sight. Went to specialist and fitted with glasses, but no relief. In just a short time, she couldn't see to read and stopped school. She was advised by specialists to have teeth thoroughly examined. X-ray showed upper right molar abscessed, deep pyorrhea pockets between all upper molars, with discharge and absorption of process to some extent. Abscessed molar extracted, others treated for pyorrhea. In very short time, her sight came back and she went back to college.

Case No. 3. Male, farmer, age around 60. Had rheumatism so badly couldn't work and hadn't worked for a day in twelve months,—lost weight, was very thin. His physician brought him to see me. Teeth very bad, with pyorrhea and two bad nerves. Several teeth extracted, others treated for pyorrhea, with proper treatment. In six weeks patient was able to walk around and in three months, was working every day on farm, and had gained in weight.

Case No. 4. Female, age 34. Was troubled with headaches, at times very severe. X-ray showed one apical abscess on left 12-year molar. Marginal uilitis with alveolor absorption and sev-

eral deep pyorrhea pockets. Abscessed tooth extracted and gums given correct treatment,—condition soon subsided,—no trouble since.

SOUTHERN MEDICINE AND SURGERY

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A journal for the promotion and diffusion of usable medical knowledge.

On Widening the Influence of the Tri-State Medical Association.

Recently a prominent member of this association sent out a letter to many of those among its membership, proposing an innovation which would have, as one of its objects, the stimulation of interest in the organization. Some of the replies, surprisingly, expressed the opinion that the Tri-State functioned mostly as a social organization.

We say "surprisingly" because we had looked upon this band of medical man as the one, within our knowledge, most united on the idea of keeping in first place the scientific objective. The twenty-eighth annual meeting will convene in Fayetteville on the sixteenth and seventeenth of the next month. One does not need to subscribe to the specious argument of the "go-getter" that "anything, to survive, must serve a useful purpose," in order to assume that an organization which today embraces in its active membership the majority of the foremost men of medicine in three great States, and has been in vigorous

operation for twenty-seven years, must have a real reason for being.

The essays presented before this body have consistently maintained a high standard of excellence; its distinguished invited guests have given us some of their most inspiring messages; the discussions have been intelligent and pertinent. From the interchange of the products of study, and the stimuli to emulation to do better and better work has come a good to the doctors and their patients in the three states represented, which can not be calculated.

This does not mean that the Tri-State can afford to rest on its laurels. Out of the suggestion of Dr. A. J. Crowell, that pilgrimages to shrines of medical learning in this country and abroad, be made under the auspices of the Association, we should be able to work out some new and useful activity.

In this connection, the editor would suggest another means by which it can render a signal service to the profession and the race and in so doing make itself the medical organization the most conspicuous for good works in all the nation. If it wills to do it, it can play the part of a modern Saint George, and slay a Dragon that is devouring its thousands daily. By taking cognizance of the devastation wrought by the Eddyite, the chiropractor, the naturopath, and every other variety of impostor, (not excepting those inside the regular profession); by exposing and opposing them at every turn; and by, as an organization and as individuals, committing ourselves to a programme of warfare which knows no truce, we can rout them from their strongholds in our midst,—from every one of which poison gas is being constantly loosed against the regular doctors,—and thus set an example which will make us known and honored wherever honest medicine has its votaries.

For a Standardized Vaccination Against Smallpox

Most likely a representative form of government (commonly miscalled a democracy) is the form best suited to what we are pleased to term the Anglo-Saxon race; but no one can consistently dispute that, for many of its features, we pay very dearly. Our Fourth of July, Armistice Day, Fair Day, Commencement Day—any day orators feed the populace on the fallacy “every American has a right to his own opinion,” and the unthinking majority swallow it greedily and proceed to express opinions on subjects on which they are possessed of no knowledge whatever.

Members of the medical profession have perhaps more opportunity than any others to observe the pernicious results of the exercise of this *inalienable right* of every citizen to oppose his uninformed opinion to one based on knowledge and sound reasoning powers.

Who has not noted that when, in a company of a dozen or more, a doctor is asked a question bearing on some aspect of his profession, almost invariably a number of answers are volunteered from lay sources, however technical and rare may be the knowledge required for giving a proper answer?

Very recently the writer had an ostensibly well-educated patient tell him that he had never been vaccinated against anything; that he didn’t “bother with that foolishness.” Less than a month ago the women of a household in which there was a case of typhoid refused to be inoculated. As to smallpox, the very protection afforded by vaccination gives an opportunity for deriding the measure; which is not to be really wondered at, for it only adds one more to the already long list of illustrations of mankind’s cock-sureness, ingratitude and lack of ability to reason.

Manila is a city of two hundred and fifty thousand. As a direct result of rigidly enforced vaccination, for seven years prior to 1918, this city had not one death from smallpox. During this time a sense of independence of this measure of prevention developed little

attention was paid to it, and in 1918 there were seven hundred deaths in Manila from smallpox! Of course, Manila is on the other side of the world; but that could just as well take place in this proud land of ours. In fact the United States of America has the disgrace of the highest death-rate from this disease of any civilized country.

In the Public Health Reports of September, 1923, Surgeon S. B. Grubbs, of the U. S. P. H. S., described a method of vaccination and certification which would “encourage vaccination not only to produce immunity, but also to measure it, if present, and then to give to those who submit, certificates that mean something and that will insure the owners against delay from smallpox quarantine, regardless of exposure to the disease.”

This idea was put into effect at Lehigh University in the fall of 1925. The technique was uniform and strictly adhered to. The skin of the upper arm was cleansed with a cotton swab wet with alcohol; allowed to dry; three short, parallel scratches made three-quarters of an inch apart, to a depth just short of drawing blood; and the virus rubbed into the two outer scratches only, the middle scratch serving as a control.

Of six hundred and nineteen men vaccinated, fifty-five had typical “takes” (Jennerian vaccinia); one hundred and fifty-five responded with a vaccinoid reaction (mostly vesicular); two hundred and ninety showed immune reactions (prompt redness or swelling at the site of inoculation); and in thirty-four there was no reaction. Two had been vaccinated a day or two before and seventy-five did not return for observation. Eighty-four per cent of those who had never been successfully vaccinated “took”, although in many of these cases unsuccessful attempts had been made in recent years. Evidence of immunity as shown by the scar of previous vaccination was found to be worthless.

Of course every one should be vaccinated against smallpox every few years. If it “takes,” you need the protection; if it does not you have suffered no in-

convenience.

Under this plan everyone vaccinated receives a certificate showing date of vaccination and type of reaction. When sufficient data are accumulated to show the real significance of the reactions other than typical "takes," we shall be able to evaluate them properly. In the meantime we can urge vaccination in the first ten days of life, again at the school age, and, afterward whenever a case appears in the community; or better, every five or six years regardless of this. Unfortunately we cannot compel it, for the law secures to every citizen the right to enjoy his disease *ad libitum*,—even those which make him a menace to his family and all others with whom he comes into contact.

Unless we can work up some great emotional appeal and enlist the services of the W. C. T. U. and the Anti-Saloon League this will probably always be true. Great is buncombe!

Making Out Health and Accident Insurance Forms.

Health and accident insurance serves a useful purpose in many instances, at times providing means for tiding over what would, without the payments from such sources, prove to be periods of want, or even destitution. Whether or not such protection is charged for at too high a rate, it is not our present purpose to inquire.

One of the harassments of the life of a doctor in general practice is that of filling out these forms. He is seldom paid anything for this service and often he is not accorded the appreciation and cooperation of the insurance companies as he should be. There have been occasions on which an agent has told a policy-holder that the reason why his check was not for a larger amount was because "the doctor did not make out the blank right"; whereas the doctor had filled it out in accordance with the facts and in compliance with the desires of the insurance company, insofar as human ingenuity could ascertain the nature of these desires.

This brings us to the blank form itself. One of these—a fresh one—lies

before us. It is styled "Physicians Preliminary notice of Disability." Its superscription says, "This notice must be filled when physician makes first visit and mailed to company immediately." Among the questions are, "What is the claimant's occupation?" "What are the duties of said occupation?" "Has the claimant in your knowledge or opinion suffered from the same or any similar disease or injury prior to this attack?" "Is the above named illness or injury the sole cause of his confinement?" "Have you reported the claimant for any other company or organization?" "Does the claimant use intoxicating liquors, drugs or narcotics to excess?" "Has the claimant any chronic or constitutional disease or infirmity or any physical defect or deformity? If so, what?"; and then the doctor is requested to state his college of graduation.

The doctor is also requested to "Name the disease or injury causing disability," and to state if there are any others; to "give a complete diagnosis"; and to "Describe the symptoms that lead you to diagnose the disease as above."

Then, notwithstanding this is a "preliminary report," which "must be mailed to the company immediately" after the first visit, the doctor is requested to answer these questions: "How many times and on what dates has he been to your office for treatment?" and, "How many times and on what dates have you visited at his home?" Presumably social calls on a daughter or sister or attendance on a son's poker party should be included! And one finds difficulty in grasping the idea behind a request that on the piece of paper which must be mailed to the company immediately after the first visit, there shall be written a record of subsequent visits.

The doctor has nothing to do with the duties of any patient's occupation. He is not the agent of the company, but is the agent of his patient. It is the business of the paid agent who sells the policy to furnish these facts.

The direction that the "symptoms that lead you to diagnose the disease as above" be described is presumptuous.

We admit the imperfections of medical knowledge, but as this applies to that possessed by doctors inside insurance offices, we see no reason why a physician should be re-examined by this functionary each time a patient of his stands in need of a written statement that he is entitled to benefits for which he has paid.

It is very questionable if a patient's medical attendant has the legal right to state to one company whether or not he has reported "the claimant" for any other company. It is to be borne in mind that, though, to the company, the individual is a claimant, to his doctor, he is a patient, and as such, entitled to all the privileges which appertain to this status. Aside from its legal bearings, it is clear that no high-minded man would divulge anything of the personal or business affairs of another, which had come to his knowledge through accident, confidence or necessity; and in this relation all three are frequently involved. If the object of the query be the establishment of collusion between doctor and patient, it would appear but an idle and puerile effort.

Much of the foregoing comment applies to the query as to use of intoxicants and narcotics. It so happens that a great number of these individuals are friendless and helpless, and they are naturally undesirous of publicity; which would make it improbable that one would suffer, in person or in purse, for betraying his patient; but, to all decent persons, this constitutes an added reason for fidelity to trust. Of all the appellations of Deity, that of "Help of the helpless," is one of the most appealing.

The features already commented on are absurd enough: we now come to the very *creme de la creme*! "Has the claimant any chronic or constitutional disease, or infirmity, or any physical defect or deformity? If so, what?"

A medical examiner, representing the company, and to whom the examiner comes in the capacity of *applicant*, is in an entirely different situation from a

doctor reporting the illness of his patient. He is an agent of the company and should take care of its interests in every honorable way. His is the responsibility for giving the company such information; and those companies which decide to insure applicants without having them submitted to a medical examination, should not be allowed to pilfer a medical report (which it has been too niggardly to purchase) from the first competent doctor consulted by one of their policy-holders.

Consider that here is a nonchalant request that a doctor state flatly, in his preliminary report, whether or not his patient has "any physical defect; and if so what:" a statement which the greatest diagnostic clinic in the world would not make, and on which it would not venture an opinion until repeated examinations had been made, many of them requiring highly trained experts along widely different lines; and records made of observations over many days. To one competent, after this first visit, to do what the company requests in this off-hand way; did he but set his mind to the task in earnest, communication with the inhabitants of Mars should be a mere before-breakfast mental exercise, a tuning up of his organ of thought for the serious work of the day,—even if it should turn out that Mars has no inhabitants.

Doctors in general submit to these ridiculous exactions through an unwillingness to have their patients who have paid for this protection fail to receive its benefits. But that does not mean that they do not resent the unjust features. There is a general willingness to fill out a form stating all that is really pertinent in a few lines.

By taking this matter up in the county societies, adopting appropriate resolutions and giving them publicity, we can save ourselves a great deal of unnecessary work for which we receive nothing, keep faith with our patients, avoid being shown in a ridiculous light, and even help each other to obtain payment for services which many companies now filch from us.

DEPARTMENTS

INTERNAL MEDICINE

PAUL H. RINGER, S.B., M.D., *Editor*
Asheville

The Heart

A new journal has made its appearance in the field of Medical literature; one which every internist should welcome with open arms. The American Heart Journal, the official organ of the American Heart Association, published bi-monthly, will fill a valuable place in keeping internists, particularly those who do not limit their work largely to cardiology, up to date in clinical and research work on the heart and the circulation. The only number that has so far appeared, that for October, 1925, (the December number has not been received as this review is being written) augurs well for the success of the new journal. Its Advisory Editorial Board contains names such as Paul D. White, W. S. Thayer, E. Libman, Alfred E. Cohn, George Dock, to mention but a few, this showing the type of mind that is behind the journal. The Editor-in-chief is Lewis A. Conner of New York; so the American Heart Journal has an experienced captain and a well trained crew.

It is impossible in the space available to deal, in detail, with the contents of this excellent publication. One must touch only the "high spots" and urge every man interested to secure the journal for himself. It will be found well worth reading from cover to cover.

Warthin, of Ann Arbor, deals with a hitherto practically unknown group of cases in his article on "Sudden Death due to Exacerbation of Latent Syphilitic Myocarditis." Attention is drawn to eight cases in whom relatively sudden death occurred, the time from the onset of symptoms to the fatal termination varying from a few hours to a few days. "The most striking clinical feature . . . is the very abrupt onset of marked symptoms of cardiac insufficiency in individ-

uals apparently in good health and going about their usual occupation." Four of the cases had a definite luetic history. There were no valvular lesions and no clinical history of rheumatism, streptococcus infection, diphtheria or typhoid. The myocardium presented patchy or streaked areas of pale yellowish, grayish yellow or gray color without hemorrhage or congestion, scattered irregularly, and particularly present in the left ventricle wall and in the interventricular septum. Microscopically there were areas of old fibrosis (completely healed myocarditis), subacute infiltration of lymphocytes and plasma cells between the muscle fibers, more acute areas of interstitial edema with infiltration of lymphocytes and plasma cells, and a predominance of polymorphonuclears. *Spirochetes were found particularly in these more acute lesions.* Warthin concludes that: "old latent syphilis is one of the most, if not the most, important causes leading to myocardial incompetency, and, as the writer has said before, the latent syphilitic, in the great majority of cases, eventually dies a 'cardiac failure' death."

E. Libman of New York contributes "A Consideration of the Prognosis in Subacute Bacterial Endocarditis" which is based upon a study of over 800 cases of subacute bacterial endocarditis extending over a period of twenty-five years. Dr. Libman's paper is so full of "meat" that one must limit himself to transcribing his summary which reads as follows:

1. There is a small number of spontaneous, complete recoveries in the type of case with which we first become acquainted.
2. There is a surprisingly large number of cases that come under observation with the sequelae of a former attack of the disease, either just before or directly after, the infectious stage has terminated, or more commonly, without any clinical recognition of the attack.
3. There occur mild cases of short or long duration.
4. The disease may exist in recurrent

form.

5. In the course of healing, the lesions of subacute bacterial endocarditis play a role in the development of chronic valvular disease.

Levine and Newton of Boston present a most interesting paper on "The Selection of Patients with Angina Pectoris for Sympathectomy" and report some cases.

They stress the necessity of an accurate diagnosis, particularly the differentiation of Angina Pectoris from Coronary Thrombosis, as obviously, sympathectomy will be of no avail in thrombotic cases. The following paragraph is of value:

In angina pectoris the sudden sensation of constriction, generally in the sternal region, coming on more particularly after walking, is momentary and can be relieved by nitroglycerine. In coronary thrombosis, on the other hand, the attack is more severe in character, lasts hours or days and is not relieved by the customary measures employed in anginal attacks.

Moreover, in coronary thrombosis the pulse is apt to become rapid and frequently shows changes in rhythm; in angina it remains essentially unchanged. Then, too, the blood pressure is likely to rise during an anginal attack, whereas it almost always falls with thrombosis, and in the latter condition a fever and leucocytosis commonly occur. The differentiation is further clarified by subsequent events. Of particular importance are certain abnormalities shown on the electrocardiograms that indicate or suggest strongly that infarction of the heart is taking place. In short, the clinical and laboratory data at our command suffice in most cases for an accurate differential diagnosis between angina and coronary thrombosis.

The authors postulate two conditions in connection with sympathectomy for angina:

1. The operative mortality must be slight.

2. Patients selected should be those who may be expected to live long enough to benefit from any satisfactory results that might follow the operation.

It is obvious that "if a patient shows evidence of myocardial damage sufficient to produce congestive heart failure, it is unlikely that he will be a good surgical risk and it should not be forgotten that anginal attacks may spontaneously cease as congestive failure sets in, a fact that may explain some of

the reported surgical successes."

Every means should be used to estimate the condition of the myocardium before proceeding to operation. Favorable signs are a knowledge that anginal attacks come only on effort and not while at rest, that they are of short duration and that there has not been much shortness of breath.

There should be no gallop rhythm or pulsus alternans. The rhythm should be normal. In this connection, it is an interesting fact that practically all patients with angina pectoris have a regular heart rhythm, and, despite the great frequency of auricular fibrillation with advancing years, it is very rare for a patient with this arrhythmia to develop angina.

Commenting upon seven patients, in whom they advised sympathectomy, Levine and Newton say: "They are all alive after intervals of from two years to three months after operation and all but one are improved. Four have no anginal symptoms at all, two have typical attacks of a nature milder than those previous to operation and one is neither better nor worse."

Brief mention has been made of three of the ten papers that compose the first number of the American Heart Journal. All ten are of interest. The writer regrets that space does not permit further details. He wishes the Journal a long and prosperous life and feels that in its birth a star of first magnitude has come into our midst.

RADIOLOGY

JOHN D. McRAE, M.D., Editor
Asheville

Visualization of the Gall Bladder

The gall bladder is visible in a certain number of cases where the technique is excellent and all conditions are favorable. In some cases the organ thus visualized is perfectly normal and in others disease is present. The extensive and beautiful work of Dr. George of Boston had about reached its greatest perfection in this division of radiography when Dr. Graham of St. Louis gave us the results of his researches in gall bladder visualization.

Doctors Graham, Cole and Coper published their first account of gall bladder visualization in the Journal of the American Medical Association in February, 1924. It was quickly taken up and used by many radiologists and internists and is looked upon as one of the most useful advances in radiology.

Gastro-intestinal studies are made by causing the patient to swallow a substance which is opaque to x-rays. Then fluoroscopic and radiographic examinations are made. The kidneys and urinary tract also are studied by injecting a solution of sodium bromide into the ureters and ureteral pelves. This substance being opaque to x-rays enables us to produce radiograms depicting their form. A parallel method has been evolved by the above mentioned doctors to be applied to gall bladder visualization.

It was desirable to find a substance which, given orally or intravenously, would be non-toxic and unirritating and which, being opaque to x-rays when excreted through the liver in the bile, would be concentrated in the gall bladder so that radiographs of this region would show the gall bladder in outline and enable us to note its form and by a series of films to learn how rapidly it filled and emptied itself.

Many drugs were tried out and discarded. Finally sodium tetraiodophenolphthalein was adopted as fulfilling the desired requirements. It may be administered orally or intravenously.

Because of the simplicity of administration the oral method is used and if the results are not satisfactory and the general conditions indicate it, the dose may be repeated by the intravenous route.

By the oral method twelve enteric coated pills, five grain each, are given to a patient of average weight; four such pills every half hour until the twelve are taken. The most convenient time is to start at 8 p. m., the patient having been on a light, fat free diet throughout the day. The last food being a very scanty meal at 6 p. m. The patient drinks a half glassfull of water with each four pills and lies on the right

side during the period of ingesting the pills and afterward until bed time. Water is to be taken freely during this period.

The first x-ray film is made on the following morning at eleven, the patient not having taken any food. It is important that the stomach be empty, otherwise the bile will flow freely into the intestines and no gall bladder shadow will be seen. Fifteen hours after the ingestion of the sodium tetraiodophenolphthalein a good gall bladder shadow should be obtained. If no shadow is seen repeat the radiograph every two hours. When the films show a concentration of the heavy bile give thickly buttered bread and cream and one hour afterwards make another film. If the organ functions normally this fatty food should cause it to discharge its contents into the duodenum and the shadow of the gall bladder will be decidedly smaller. Just as a series of films must be made in gastro-intestinal studies, we must make the serial films in examining the gall bladder in order to study the function of the organ.

Our conclusions are drawn by comparing the films in question with films made of known normal cases and correlating with the history and clinical manifestations. Deformities, size and consistency of the shadow are significant. Absence of a shadow may result if the stomach is not empty when the dye is administered, if the food is taken improperly during the study or, if there is absence of liver function as in cirrhosis of the liver. Another cause lies in obstruction of the bile duct. Deformities result from products of inflammation. Mottling of the shadow is produced by gall stones lying in the bladder when it is filled with the opaque bile.

Should the dye be administered intravenously there is greater certainty of visualizing the gall bladder for none of the substance escapes with the fecal matter and the lack of a shadow after eight hours almost certainly result from a pathological state in liver, bile ducts or gall bladder.

For a patient of average weight about 3.5 grams are dissolved in 40 c. c. of normal salt solution and administered early in the morning. As in the oral method the stomach must be empty and no food taken until after a good gall bladder image is demonstrated on the films. The series of films should be made after four, eight, twelve and twenty-four hours. Except that the first film is made earlier because by the intravenous method excretion begins earlier, the procedure and conclusions are practically the same as in the simpler but less precise oral method.

There are almost no contra-indications to the use of this method of gall bladder visualization.

DERMATOLOGY

JOSEPH A. ELLIOTT, M.D., *Editor*

Eczematoid Ringworm of the Hands and Feet

Eczematoid ringworm of the hands and feet is one of the most common skin diseases met with today, and yet it is not generally recognized. This unfamiliarity on the part of the physician, with such a prevalent condition is not unexpected as very little was known of the condition by American dermatologists until Ormsby and Mitchell presented their excellent paper on the subject before the American Medical Association in 1916. They reported sixty-five cases with photographs of the clinical cases and cultural findings. This work aroused a great deal of interest among dermatologists.

Prior to that time a number of cases had been reported in Europe by Fox, Pellizari, Djelaleddin Moukhter, Whitfield, Sabouraud, and Kauffman Wolff. These observers were able to demonstrate mycelial threads in cases that had been diagnosed eczema or dyshidrosis. Whitfield described five cases of ringworm of the hands and feet that in his opinion were indistinguishable from the ordinary outbreak of vesicobullous eczema.

Since the work of Ormsby and Mitchell appeared, a number of Americans have done some excellent cultural work in these cases and have reported large

numbers of clinical cases. Notably among these are White, Williams, Hodges, Mitchell and Weidmann.

Whitfield has divided the clinical manifestations of ringworm of the hands and feet into three groups—(1) Acute vesicular; onset sudden with the characteristics of acute eczema or dyshidrosis. (2) Chronic intertriginous of toes; secondary to the acute vesicular type, characterized by whitened, sodden mass of epithelium between toes. (3) Chronic hyperkeratotic; enormous overgrowth of the horny layer.

Kauffman Wolff has a similar classification. She divides her cases into (1) vesicular, (2) squamous, and (3) pyodermic.

The initial lesion in all of these cases is a vesicle. The vesicle may occur singly or in groups. It is deep seated in the epidermis and has been accurately described as having the appearance of a sago-grain embedded in the skin. The vesicle usually arises from a clear skin without the appearance of a surrounding erythema until secondary infection takes place which also changes the content of the vesicle from a clear to a cloudy fluid. The content of the vesicle is strongly alkaline and of a mucilaginous consistency. The latter characteristic is of some diagnostic importance as most other vesicular lesions are more watery. The content of the vesicle may be absorbed leaving a brown macule. Within a few days the top of the macule pulls off leaving a shiny surface with a collarette of scales around the border. Where the vesicles are numerous they frequently become confluent forming large bullae. These occasionally become secondarily infected forming a large pyodermia. These lesions may be so extensive on the feet that the patient is confined to bed, being unable to bear the weight on the feet. Lymphangitis is not an uncommon complication of the pyodermia cases.

The hyperkeratotic lesions are very rare in our experience. The pyodermias less rare, while the acute vesicular and chronic intertriginous are very common. About a year ago we made a study of 250 cases. We found the feet

alone involved in 106 males or 42.4 per cent and 33 females or 13.2 per cent. The hands alone were involved in 26 males or 10.4 per cent and 54 females or 21.6 per cent. Both hands and feet were involved in 16 males or 6.4 per cent and 15 females or 6 per cent. Secondary lesions occurred in 8 males or 3.2 per cent and 11 females or 4.4 per cent. The nails were involved in 15 cases or 6 per cent. Of the total number of cases 148 were males or 59.2 per cent and 102 females or 40.8 per cent. Since this study was made we have added 230 cases to our list making 480 new cases seen during the past 6 years besides the large number of recurrences or reinfections.

While the clinical appearance of eczematoid ringworm is sufficient for a diagnosis, in some cases it is often necessary to find the mycelia in order to make a positive diagnosis. This may be attempted in two ways; (1) by direct examination of material from the eruption, (2) by cultural method. At times it is necessary to resort to both methods. Material is obtained by clipping off the tops of the vesicles in acute cases and obtaining scales from borders of the chronic cases. A portion of the material is placed on a glass slide to which is added a few drops of a 15 per cent sodium hydroxide. This is heated until the scales are thoroughly macerated. A cover slip is placed over the specimen and pressed down firmly. This specimen is then ready for a thorough microscopic study. If molds are present the mycelia can usually be found. The other portion of the material is soaked in 95 per cent alcohol for thirty minutes in order to destroy the bacteria normally present and is then planted on Sabouraud's proof media. As soon as a growth appears it is transferred to the other media in order to get a pure culture. The culture is then ready for careful microscopic study. Hodges in his extensive cultural work of these cases demonstrated 3 distinct molds. These he classified as trichophyton A, B, and C. The colony of trichophyton A is

white at first but later becomes pink. There are present pyriform conidia and pluri-septate fuseaux. Trichophyton B shows a white downy growth at first but later becomes yellowish. Pyriform conidia were observed but there were no fuseaux. Trichophyton C is white at first, later becoming cream colored. This organism has conidia and fuseaux, but also has numerous spirals characteristic of gypseum group.

In our cultures we were able to demonstrate a number of molds that corresponded to Hodges A and B groups but did not find any of the C group. One must be careful not to overlook the contaminating moulds.

EAR, EYE, NOSE AND THROAT

C. N. PEELER, M.D., *Editor*
Charlotte

Observations On Foreign Body Work

Foreign bodies in the air and food passages today are not the "curiosities in medicine" that they once were. Large numbers of cases reported by Jackson and others over our Country show that these accidents are of common occurrence. The writer had twelve cases during one month last fall, three of these coming to the hospital in one day.

Due to the prevalence of this phase of medical practice, every general practitioner should acquaint himself with the signs and symptoms which are caused by the foreign intruder either in the air or food passages. As a clinical entity every foreign body case should be studied from the standpoint of etiology, pathology, symptomatology, diagnosis and treatment.

The general practitioner is the first to see these accident cases and for this reason he should be familiar with the common initial signs and symptoms which are present in a case of this nature, either where the foreign body has been aspirated or swallowed. A large number of these cases could be prevented if mothers were warned of the dangers encountered when such accidents occur.

Carelessness is the most common factor in the occurrence of foreign bodies in small children. The great majority of cases occur in those under three years of age.

Every case giving the history of having aspirated or swallowed a foreign body should be carefully investigated. The first symptoms of coughing, choking and gagging are very suggestive. Where a child has some foreign substance in the mouth and has the above symptoms he should be considered a foreign body case until proven negative. If an organic substance, as a peanut or part of one, is aspirated, the child will in a few hours set up an intense inflammation of mucous membranes of the tracheo-bronchial tree accompanied by high temperature—the younger the child the higher the temperature.

In every obscure chest case the question of foreign body should be considered. By physical examination of the chest and by x-ray picture, the foreign body can be localized. Where the foreign body is in the trachea there is usually much coughing coming in paroxysms. There may be heard the "audible slap and palpatory thud" caused by the forcible movements of the foreign body. Where the bronchus is partially plugged the lung is hyperresonant, the movement of the chest wall is limited on same side and is increased on the opposite. Rales may or may not be heard, due to the length of time the obstruction has been present or to the reaction of the tissues. Organic substances cause much more severe reaction than inorganic. The astmatoid wheeze is usually present, but may be absent where the bronchus is entirely plugged, either by foreign body or by thick secretions.

The x-ray picture usually shows four distinct points when the bronchus is plugged—viz: the mediastinal structures are pushed to the opposite side, the diaphragm downward, the intercostal spaces are increased, and the lung is emphysematous.

In all cases removal of the intruder should be done by the direct method. Manipulation by the fingers or otherwise should not be done by the parents

or physician. Passing of bougies or other instruments blindly may do great harm.

SURGERY

A. E. BAKER, SR., M.D., *Editor*
Charleston

Abstract of Paper on Gastric and Duodenal Ulcer

In his paper "The Diagnosis and Medical Treatment of Gastric and Duodenal Ulcer" Dr. Rendleman writes as follows:

In the diagnosis of gastric and duodenal ulcer the history and the x-ray examination give the most reliable information. The most common complaint is pain. This has a characteristic periodicity, recurring punctually from one to four hours after one or more meals a day. It is a gnawing and burning pain located in the epigastrium but occasionally referred to the back near the spine and below the left scapula. It becomes more severe after a heavy meal and is relieved by food and alkalies. It never begins immediately after meals and never lasts after the time the stomach should be empty unless there is retention from pyloric obstruction.

In gastric ulcer the cycle is food, comfort, pain disappearing before the next meal, comfort. In duodenal ulcer the cycle is food, comfort, pain lasting until the next meal. The pain which awakens a patient regularly at a certain time of night is characteristic of duodenal ulcer.

The diagnosis of duodenal ulcer may be made from the history alone. That of gastric ulcer is more difficult. Gastric distress is probably due to muscular contraction, gastric tension, and especially the action of free hydrochloric acid on the nerve endings. Local tenderness may be present. Heart-burn, sour eructations, and belching are common. Vomiting may occur at the height of the distress, especially when there is retention from pylorospasm or organic obstruction, and gives immediate relief. Hematemesis is of considerable significance. Blood in the stools may first call attention to the ulcer. Perforation may occur without previous symptoms.

In atypical cases the x-ray is of great value in differentiating between the gall bladder, appendix, and stomach. The direct x-ray signs are a crater, an hour-glass shape of the stomach, and deformity of the cap. The indirect signs are incisura, a six-hour residue, hyperperistalsis, absence of filling of the cap, and localized tenderness.

Analysis of the gastric contents determines mainly the motility and emptying time. There is usually high acidity, and frequently sarcinae are found. The free hydrochloric acid is of interest only to rule out cancer. The author does not make a routine gastric analysis in all

cases of gastric conditions.

Examination of the stools shows when bleeding has stopped, which is usually promptly after the beginning of treatment. The therapeutic test if of great diagnostic value because diet and alkali give prompt relief unless there are complications such as perigastric adhesions, pyloric obstruction, or malignancy.

For an accurate diagnosis it is necessary to determine also whether complications are present. Pyloric obstruction is indicated by the vomiting of food eaten the day before or of large quantities of gastric juice; a food residue after seven hours; a six-hour barium-meal residue; and visible peristaltic waves. Acute perforation, the most important complication, is evidenced by sudden, acute, excruciating pain in the upper abdomen which doubles the patient up and produces muscle rigidity.

Ulcer must be differentiated from cholecystitis, chronic appendicitis, hyperchlorhydria, and cancer. In patients over fifty years of age the author sees more ulcers than cancers. The close relationship of cholecystitis, appendicitis, and ulcer is too frequent to be a coincidence.

Rendleman employs a modified Sippy treatment. All patients operated upon should be treated post-operatively for weeks or months. Gastro-enterostomy must be supplemented by reduction and neutralization of the gastric acidity. Physical and mental rest is essential. Most cases require rest in bed for from two to four weeks. This reduces the food requirement to the minimum and rests the stomach. Mental rest may sometimes be obtained better by ambulatory treatment. Diet and alkalis should be continued for a year or longer. In the beginning of treatment it is important to aspirate the stomach occasionally to determine whether the acid is neutralized.

Most cases in which medical treatment has failed are cases in which such treatment was not thorough. Medical treatment will usually relieve the obstructive type of ulcer due to spasm or inflammatory exudate in from two to three weeks. Lavage of the stomach at evening removes food and gastric juice accumulations and gives the stomach a rest. Acute hemorrhage is controlled by absolute rest, the administration of morphine, and fasting. Alkali neutralization of the acid prevents digestion of the clot at the site of the hemorrhage. Foci of infection must be eliminated, but the removal of a large number of teeth will prevent the thorough mastication of food.

From the medical viewpoint the author considers that operation is indicated by suspected cancer, complete pyloric obstruction, incomplete obstruction which has not yielded to several weeks of medical care, repeated or continuous hemorrhage as determined by examination of stools, acute and chronic perforations, and any ulcer that does not yield to thorough medical treatment. The place of surgery in the treatment of uncomplicated ulcer has not yet been definitely determined. This is evident from the constant change in methods used and the facts that many gastro-enterostomies

must be undone, the symptoms may recur and a gastro-jejunal ulcer may form after operation, and the operative mortality, even in cases treated by the most skilled surgeons, ranges from 2 to 8 per cent.

In the author's opinion, gastric and duodenal ulcer will probably remain borderline lesions.

Many acute ulcers heal and leave no symptoms or scar. The ulcer is considered healed if the patient remains without symptoms or bleeding for several years, the fluoroscope shows normal stomach outlines and the passage of peristaltic waves through the ulcer area, and there is no local tenderness.

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MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

The Obscurity and the Magnitude of the Dementia Precox Problem

Last week in New York City I attended the annual two-day session of the Association for Research in Nervous and Mental Disease. This body meets each year during the Christmas holidays and discusses the various phases of one medical condition. Months before the meeting is held assignment of the different problems of one condition is made to various members of the body, and in that way practically no feature of the subject under discussion escapes attention. Papers are read, each reader is questioned keenly, and each topic is discussed fully. The Association is composed of the leading men engaged in the practice of neurology and psychiatry in the United States. In former years epilepsy has constituted the subject of a symposium; so has, also, sleeping sickness, multiple sclerosis, and heredity in nervous and mental disease.

At the meeting last week dementia precox was the problem under discussion. Every phase of this obscure and baffling malady was fully discussed. I was impressed by the apparent fact that not even one of the great masters seemed to be willing to give expression to an opinion as to what dementia precox really is. It is known to be a condition characterized, as a rule, by gradual loss of mentality, and it develops generally in young people, but there is no definite knowledge as to what it is fundamentally. No one is able to demonstrate,

for instance, that it springs out of unsound heredity; that it is a manifestation of disease of the central nervous system, or of any other organ of the body, or that it is due to disturbed function of any of the ductless glands. About any medical condition so obscure much cannot be said concerning either treatment or outlook. The feeling has been rather general that the condition is one which leads, as a rule, to steady deterioration in the emotional and in the intellectual domain. Most psychiatrists continue to hold that gloomy view, but there are a few workers in mental medicine who believe that recovery is not unknown. One speaker who reported a certain number of recoveries was questioned about what he meant by the term, recovery; and the inference drawn from his explanatory statement was that absolute restoration to the previous mental normal probably did not take place. In a condition so vague nothing could be said about specific treatment. The general feeling seemed to be that constant and skilled medical and nursing care might arrest the tendency to profound mental and emotional deterioration.

I came from the meeting impressed by the bigness of the big men. Their humility was impressive. They made no pretense at knowing what is not known. They were reaching hands out into the darkness for a light. They were frank and full in the expression of their ignorance. They were crying out for help. The overwhelming sense of the assemblage seemed to be that dementia precox remains one of the great medical problems about which there is no definite knowledge. Viewed from the economic standpoint it must be the world's greatest burden in the domain of ill-health. There are probably 300,000 patients in the state hospitals and in the private sanatoria of the United States. One hundred thousand of these patients are probably under treatment for dementia precox. The condition of most of them is such that only death can discharge them, and many of them live out in such hospitals their allotted span of years. The condition not

only lifts them out of productivity but it transfers them to the group in which they remain liabilities. They exist for years in a condition of helpless invalidism. Malignancy is sometimes eradicated: tuberculosis not infrequently confesses defeat, but dementia precox remains obscure, and, consequently, the condition defies treatment, eradication, or arrest. There is little doubt that it costs the taxpayers of each of the Carolinas and Virginia annually little less than half a million dollars for those under institutional care in each of those states. The complexity and obscurity and the ignorance in high places of a problem so universal in its distribution and so overwhelming in its sweep cause one to doubt the validity of the optimism that one hears so much of in medical meetings in general and in public health reports in particular. The great medical problems are not understood at all. Chiefest of these, perhaps, is dementia precox.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

Malformations of the Lower Spine Based on a Roentgenographic Study of Children and Adults

With the more general distribution and use of the x-ray in recent years has come the need of keener clinical and roentgenographic interpretation of conditions in the lower spine. More backs are being presented for examination with true pathology of some kind and malingerers still show up, especially in connection with industrial accidents.

Roentgenograms of the lumbo-sacral region in cases of painful back show many anatomic variations. Some of these would seem to be the direct cause of pain. There is still, however, considerable confusion about the significance of these changes. Knowledge of their frequency in the so-called normal back would be of value in estimating their importance in cases of backache.

The author has studied three series of roentgenograms of the lumbo-sacral region. The first was of adults, whose backs were apparently normal, and who had never had backache. These varied in sex, in age from six-

teen to sixty-eight, and in occupation from student to laborer. The second comprised children, who were supposed to have normal spines. The third consisted of scoliosis cases taken at random from the files of the Roentgen-ray department of Washington University Medical School. The anatomic variations sought were: large transverse spinous processes of the fifth lumbar vertebra which might impinge on the ilium; sacralized transverse processes of the fifth lumbar vertebra; bifurcation of the fifth lumbar or the first sacral and other structural anomalies. Slipping of the lumbo-sacral articulations and developmental abnormalities were also noted.

In the first series of normal adult spines 55 per cent showed varying degrees of abnormality, some showing several varieties. Fourteen percent showed variations in the transverse process of the fifth lumbar which might possibly have caused backache. Fourteen per cent of the sacralized transverse process, three double and one on the left side, as compared with 8.5 per cent in cases of painful back formerly reported. There was one bifid first sacral, three per cent as compared with six per cent in the series of painful backs. In 14 per cent there seemed to be a slipping of the lumbo-sacral articulation. Six showed a lateral displacement of the spine on the sacrum, four to the left, and two to the right. In two there was scoliosis with some rotation, and in one rotation without scoliosis.

The second series consisted of forty-five plates of normal spines in children. Only two per cent showed long transverse process. There were only four per cent sacralized processes. This is an interesting fact when compared with 8.5 per cent in painful backs and 14 per cent in normal adults. In 7 per cent bifurcation of the fifth lumbar and first sacral was present. Bifurcation of the first sacral spinous process was most striking. This, however, does not represent its true frequency. The ages of these children ranged from four to fourteen years, so that in most cases the apparent bifurcation was probably due to incomplete ossification. Scoliosis was present in one and a general irregularity and asymmetry in four, 11 per cent. On the whole this series seemed to be rather free from abnormalities.

In the third series, scoliosis, the changes were much more marked. Sixty-eight per cent showed abnormalities in the lumbo-sacral region. In most of these the variation was marked. In practically all, the sacrum seemed to be tilted, and the articular line of the sacroiliac joint seemed wider than in the normal, and in two cases was definitely displaced. In all cases with rotation there was slipping of the lumbo-sacral articulation on the side of the curve, and all curves were left lumbar. It is impossible to say whether the slipping of the articulation was the cause of the scoliosis or whether it was due to the rotation. In 27 per cent there was a sacralized transverse process,

on the right in five, on the left in one, and double in four. This is a marked increase over the other groups studied and would tend to indicate that the sacralized transverse process plays an important role in the etiology of scoliosis. The first sacral process was bifid in five, 14 per cent. In one case there was fusion of the ribs spina bifida, and other anomalies, and in another there were only eight ribs on one side.

It would seem from an examination of these plates that we have the same variations in the apparently normal spine as in the painful back. The large transverse process of the fifth lumbar is much more common in painful backs than in the normal adult spine, 25 per cent to 14 per cent, while in children there were only 2 per cent. It is possible that the long transverse process might cause backache, not so much by actual impingement as by more readily allowing ligamentous strain. It is also possible that the small percentage, 2 per cent, in children is due to the fact that the process has not as yet fully developed and consequently does not show in the roentgenogram. The author has not confined himself, however, to true sacralization, in which there is bony union between the transverse process of the fifth lumbar and the sacrum, but has included those cases in which the transverse process is very large and to all intents and purposes is sacralized, though there may be a line of demarcation between it and the sacrum. This type is probably more frequently the cause of backache than the true sacralized process.

Bifurcation of the first sacral vertebra is not as common as the other anatomic changes. It is practically the same in normal adults and normal children, but is slightly larger in painful backs and very much larger in scoliosis. It would seem that it might possibly play a part in the production of painful back.

In scoliosis the anatomic and developmental variations are all more frequent than in the other series. This is to be expected, especially in the case of the large unilateral process which undoubtedly is an important factor in causing scoliosis.

It would seem from this study that variations in the lumbo-sacral region occur frequently in persons who have never had any symptoms of backache and that some of these variations are very marked and severe. They also occur in persons who lead an active life and who work hard. It is probable that these variations predispose to backache but that posture, muscle relaxation, and ligamentous strain are the actual causes.

PEDIATRICS

FRANK HOWARD RICHARDSON, M.D., *Editor*
Brooklyn, N. Y. and Black Mountain, N. C.

How Teaching May Be Made Less Difficult

To the thoughtful observer, much of the difficulty that besets the jobs of parent and teacher, seems due to an ignorance, upon the part of these conscientious folk, of the mental processes of the objects of their attention, the children. They have read and studied; but psychology, as taught in the normal schools, colleges, and mothers' courses, has taken them but a limited distance along the road of understanding the individual child with whom each has had to deal. This psychology that they have studied has dealt with a child mind which, natural as it looked in the book, simply "was not there" when they tried to find it in classroom or family situation. They have felt like the little boy who tried to carry out his teacher's instructions to observe the habits of animals, and who ruefully observed: "Animals don't seem to have no habits when I start to observe them!"

There is, however, a newer body of psychological material that does apply to the mind of your child and my pupil; and that explains much of what has previously been inexplicable to us in terms of our formal psychology. It deals with the things that children do, that a parent or teacher does not want done; the reasons for his mistakes; the causes of his restlessness, his inattention, his fits of the sulks, his crude drawings, and his crude reactions toward his superiors and toward his fellows. Best of all, it deals with the most important factor of all, in the educational and disciplinary situation, did we but know it,—the mind of the *parent* or the *teacher himself*, which is of course an indispensable factor in every situation in which an adult tries to affect a child for the latter's good. The old psychology put all the emphasis upon the study of the subject; it devoted no attention at all to the very important tool, the mind of the teacher himself! It has been found that a knowledge of himself (the teacher) is quite as indispensable to an ade-

quate dealing with the situation, as is a knowledge of the mind of the child. The old Greek "gnothi seauton", know thyself,—is thus given a new meaning. Previously, all education and all discipline have taken it for granted that there must be a ceaseless warfare, a constant struggle, between the adult and the child; that the older must be constantly on the alert against the inherent laziness, idleness and insubordination of the younger; that this is not a criticism of the child, but the recognition of a natural state of original sin that must be purged, directed, chastened, by the superior mind.

The newer body of psychological knowledge introduces a very humbling, chastening, and to some of us highly disturbing, conception. It is that the directing mind of *parent* and *teacher* needs studying and understanding, as well; that it is frequently as lazy, idle, and wrongheaded, as is that of the child; and that this is a good half of the reason for the constant conflict, and pitting of personality against personality, that we call education and discipline. If this be true, then the first prerequisite of acceptable parenthood and teacherhood would seem to be some sort of adequate conception of one's own mind and motives; and if this adult mind is the tool with which we are to mould and shape the character of the plastic child mind, we must, as successful workmen, at least understand the tool with which we are to work. And as we are coming to understand that this mind of ours consists not only of the *conscious* part that we can get at and examine, but also of the *unconscious* part that strenuously and often successfully resists our attempts at getting acquainted with it, we shall see that this preliminary job is not one to be lightly considered.

The newer school,—shall we say the millennial school?—is one in which this wasteful friction of will against will,—this constant battle of wits between pupil and teacher,—has been eliminated. In its place we shall find teacher and pupils striving to attain to the highest degree of knowledge,—helping, not

trying to thwart, each other. The craving for a sense of superiority, of mastery, will not find expression in a hopeless striving for satisfaction by conquering a personality,—that of the teacher; but will be expending itself

upon that wholly desirable consummation, the mastery of knowledge and skills,—a far higher, more acceptable, and more satisfying object than mere mastery of a personal opponent can ever possibly be.

NEWS ITEMS

Resolutions on the Death of Dr. W. W. Pharr

Whereas, the hand of Death has removed from our midst Dr. William Walton Pharr; and

Whereas, we are desirous of evincing and permanently recording our sense of loss and sorrow:

Therefore be it resolved:

That the Mecklenburg County Medical Society has lost one of its best loved and most loyal members;

That the Profession of Medicine has one less devoted practitioner and sterling ornament;

That the sick and suffering have been deprived of a wise and kindly counselor and guide; and

That these resolutions be spread on the minutes of this Society and copies sent to the family, to Southern Medicine and Surgery and to each of the daily newspapers of Charlotte.

Jas. M. Northington,

Jan. 5, 1926.

Committee.

Dr. Samuel T. Crowson, of Taylorsville, died on January 5, of angina pectoris. Dr. Crowson was forty-eight years of age. Following his graduation from the University of Tennessee, he had practiced medicine in Alexander County for twenty years. He had been county health officer for a number of years and had represented Alexander County in the legislature.

He is survived by his widow, Mrs. Pearl D. Crowson, and three young sons, William D., Samuel T. Jr., and Fred Crowson.

Dr. Verne S. Caviness, of Raleigh, has removed his offices and laboratory to the eighth floor of the new professional building. Practice limited to diagnosis and internal medicine.

Dr. Amzi J. Ellington announces to the medical profession the removal of his offices to the Fonville Building, continuing the practice of eye, ear, nose, throat and refraction, corner Main and Front Streets, Burlington, North Carolina.

Dr. W. H. House, a most highly esteemed doctor and popular citizen of Goldsboro, died very suddenly of angina pectoris on January 3. Dr. House was an honor graduate of the Jefferson Medical College. He was in active military service almost throughout the World War, was awarded four war crosses, one of which was personally bestowed by the King of England. One of his latest honors was the presidency of his District Medical Society.

Besides his widow, Dr. House leaves his aged father and mother, of House, and a number of brothers, sisters and other relatives.

On January 11, a **hospital which presents unusual features**, was opened in **Thomasville**. It is located on the third floor of the First National Bank building and will utilize the services, in consulting and other capacities of a number of specialists from neighboring cities. These include Drs. Phillips, Jennings, Yokeley, Hodgin and Walker, of Greensboro; and Dr. Burrus, of High Point.

Dr. Andrew Blair, a native of Pennsylvania, and a graduate of the University of that State, has opened offices in the Medical Building, Charlotte, for the practice of medicine. Dr. Blair is a hospital graduate of the City Hospital of Cleveland, Ohio.

Dr. Casper W. Jennings, formerly of the Martin Clinic, of Hot Springs, Arkansas, has located in Greensboro for the practice of his specialty of Ophthalmology, Otology and Laryngology.

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Austin I. Dodson, M.D., Urology

Fred M. Hodges, M.D., Roentgenology

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REVIEW OF RECENT BOOKS

THE SURGICAL CLINICS OF NORTH AMERICA, October, 1925. Vol. 5, No. 5. St. Louis Number. Philadelphia and London, W. B. Saunders Company.

The tremendous advance made by St. Louis during the last decade is well illustrated by the character of this number.

Six patients are discussed in one clinical lecture by Dr. Willard Bartlett, in each of whom thyroidectomy and a second major operation were done. The variation in the nature of the secondary operation, and in the gravity of the thyroid symptoms, were controlling factors in deciding on the method of procedure.

Dr. Ernest Sachs cites the lesions of the central nervous system amenable to surgical treatment. Two unusual and serious conditions, "Fracture of the Larynx," and "Acute Pancreatitis" are dealt with. The former by Dr. Roland Hill, and the latter by Dr. Edwin P. Lehman. "Surgical Treatment of Angina Pectoris," a matter of the very first interest to all doctors, is elaborated by Dr. M. G. Seelig.

Cholecystography and Osteomyelitis are the subjects of the clinical lecture of Dr. Graham and Dr. Clopton respectively.

THE MEDICAL CLINICS OF NORTH AMERICA, Vol. 9, No. 3. New York Number. 1925. Philadelphia and London, W. B. Saunders Company.

The first article in this number on "The Interpretation of Sugar Tolerance Tests" by Dr. Herman Mosenthol, deals with a subject of extreme clinical value in a comprehensive manner. In the second Dr. Bastedo directs attention to "Digitalis Hypersusceptibility" and gives definite instructions on when to stop the drug.

Other clinics of special interest illustrate the use of quinidine, and liver function tests, and still others discuss bulima, ringworm, gastric syphilis, focal infection and pulmonary tuberculosis in early infancy.

A MEDICAL FORMULARY—By E. Quinn Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Twelfth Edition, Revised. \$2.50, Lea & Febiger, Philadelphia and New York, 1925.

Thornton's Formulary has been found useful for such a number of years as to have arrived at its twelfth edition. So comparatively little attention has been devoted to treatment in our college courses that there has been a need for some supplementary information. This Thornton supplies in a handy form, entirely rewritten to conform to the changes in the latest revision of the U. S. Pharmacopeia.

TUMORS OF THE COLON AND RECTUM—Their Pathology, Diagnosis and Treatment, by Jerome M. Lynch, M.D., Surgical Director, St. Bartholomew's Hospital, N. Y., and Joseph Felsen, M.D., Attending Pathologist, St. Bartholomew's Hospital. \$12.00 net. Paul B. Hoeber, Inc., New York, 1925.

The authors recommend a study of the rectum and colon as a part of every thorough general examination. The gross and microscopic anatomy and the physiology of the parts are carefully described.

The work is profusely illustrated, some of the illustrations being in colors. Illustrative clinical histories with pathological reports are inserted to enhance its teaching value.

Chapter VI deals with "Excision of Lymphatic Areas Draining Malignant Neoplasms of the Colon and Rectum" and the next chapter treats of non-surgical and palliative procedures.

For the man who wishes to practice proctology rather than the wiles of a "pile-doctor," here is information and instruction of the first order.

RADIOGRAPHY—A Manual of x-ray Technique, Interpretation and Therapy by Charles D. Enfield, M.D., F.A.C.P., Roentgenologist to St. Anthony's Hospital and Norton Memorial Infirmary, Louisville, Ky. 194 Illustrations. \$10 net. Philadelphia, P. Blakiston's Son & Co.

This volume has an attractive title and appearance. It is written for men who have had little experience in x-ray

work, so takes little knowledge of its intricacies for granted. The first chapter deals with "The Place of x-rays in Modern Diagnosis." To quote from it, "The phrase 'x-ray diagnosis' has been used and nearly always incorrectly. The conditions in which x-ray diagnosis may properly be referred to are about as numerous as the disease for which a specific therapy exists. The x-ray report as a link in the diagnostic chain is, however, quite another matter." Evidently, the author is a level-headed judge and not an over-enthusiastic advocate.

The history and physics of the ray are outlined to serve as a background and basis for the technical instruction; then follow accounts of equipment, materials and methods, with directions for protection of patient and operator; description of technique for radiographing the various organs and parts of the body, and of interpreting the findings.

There is an excellent chapter on "The Roentgenological Report."

The final section is devoted to therapy and is unusually clear and informing, giving the reasons for the variations in

modes of application.

Altogether it is remarkable how much of value has been condensed into the amount of text used and how skillfully the many illustrations have been arranged for elaborating the text.

INFECTIONS OF THE HAND—A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand and Forearm, by Allen B. Kanavel, M.D., Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Wesley Memorial Hospital, Chicago. Fifth Edition, thoroughly revised. Illustrated with 196 engravings. \$5.50. Lea & Febiger, Philadelphia and New York.

At first thought it might seem strange that a whole volume would be devoted to infection of the hand; but, when we consider the number, the seriousness and the frequent serious results of these infections,—as crippling or loss of the member, or even of life,—it is obvious that the subject merits the most elaborate dealing.

Throughout the various sites and forms of infection are clearly described and *definite* treatment recommended. Common errors in treatment are noted.

Of especial interest are chapters on the sequelae and their treatment.

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A cursory survey of the gratuitous service given by physicians through medical institutions in the Greater City of New York, based upon the number of "free hospital days" aggregates \$16,000,000 annually.

This figure by no means indicates the total bill that the city-controlled and private hospitals would have to pay if the doctor, like other professional men, demanded and received payment for each and every service performed.

It is based upon returns from but 107 of the 140 odd medical and surgical serving institutions giving some portion of charity service.

Evaluating the physician's service nationally upon the hypothesis that outside New York City but a pro rata service in quantity is given equal to 50 per cent, and assuming that each "Hospital Days" service was paid for at the rate of \$3.00 per day, the nation's bill due the doctor would be more than \$135,000,000 annually.

A survey made within the City of New York (by no means complete because many of the hospitals had not their figures at hand for this quick computation) shows the following:

Institutions in New York are roughly grouped into five classes:

Group one and two are the city-controlled hospitals—those operated and maintained by the City Government—and are composed of fifteen institutions, ten of which are under the management of the Department of Public Welfare; the others, known as Bellevue and Allied hospitals, include five institutions.

The third group are those supported in part by the Catholic Charities, of which there are twenty-two institutions. The fourth group is the United Hospital Fund group, which is financed annually, partly through drives, representing fifty-six institutions. The Independent Hospitals into which class are gathered all those institutions not included in the above four groups compose the fifth group. There are forty odd institutions in this latter group, of which number fourteen have made returns for the purposes of this survey, the other four groups being complete in their returns.

These groups show the following:

Department of Public Welfare group (10 hospitals) 1,879,871 free days.

Bellevue and Allied Hospitals (5 hospitals) 259,232 free days.

Total City controlled hospitals, 2,739,103 free days.

Catholic group (22 hospitals) 322,610 free days.

United Hospital Fund group (56 hospitals) 1,563,658 free days.

Independents (14 hospitals) 395,131 free days.

Total: Hospitals, 107; free days, 5,020,502.

The total displayed above, 5,020,502 "free hospital days" represents the number of free days service given to free charity patients in the city's hospitals in a year.

Going a step further, it is no exaggeration to say that each patient is visited at least three times in each "hospital day" by a physician who receives no compensation whatsoever.

If we compute each visit of the physician as being worth a dollar, we find that the bill would be \$15,061,506 per annum.

This includes the services of the consulting and outside attending physicians and surgeons, together with the services of the internes, but it is all medical or surgical service.

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we are placing the compensation at a price so far below normal for the compensation for a similar service outside the institutions as to prevent criticism or cavil of any kind.

For, when it is considered that these include the best medical and surgical brains in the country, the most expert men in the profession, who, in some instances are known to charge fees as high as \$5,000 for an operation, and others who charge as low as \$25 for a consultation, and then again those who charge no more than \$3 per visit to outside patients, we feel that we have been almost unfair in the computation of the doctor's bill; but we will let it stand at that figure to show the prodigious sum that annually would be due the doctor if, as I have stated before, he demanded and secured even this small measure of pay for his services in public institutions.

Now for the National Bill

As New York City represents about 1-18th of the total population of the United States, the national bill would, therefore, be eighteen times that of the City of New York, but we will not use that figure, because it might be argued by some that the measure of service given throughout the rest of the country is not in the same proportion either in quantity or quality.

Then, there are those who may even claim that the service outside Greater New York by physicians, through similar institutions, is greater proportionately both as to quantity and value.

The figure arrived at here is not intended as one of discourtesy to any city or section in any of the states, it is merely taken to arrive at an evaluation of the national service of the physician as a basis, if you please, for a more thorough evaluation of his services and with the hope that a national census may be taken which will be thorough, complete and satisfying.

Therefore we will set down as our premise that the balance of the country gives pro rata a service of but 50 per cent of that given by the City of New York. This abnormally low computation shows that the physicians national

bill would total, \$135,553,554.

If we place the total number of registered physicians at 165,000 nationally and divide this into the figures above obtained, we find that each and every physician in the United States should be credited with \$821.00 gratuitous service every year.

Of course, every physician is not connected with a hospital or similar institution giving gratuitous service to the poor, and this figure is attained, therefore, by making a spread of the entire bill over the 165,000 registered physicians.

Then again, it must be remembered that this sum does not in any sense measure the free service of which no accounting ever has been made or ever can be made—of the charity or free service that the physicians give to the poor whom they meet in their daily practice.

Just what this bill would amount to, God only knows, because the physician never keeps account of it, and if you happen to mention it to him he will laugh it off, saying "Oh, that's for the good of the service—for the good of mankind."

But there is another element that enters into this question of service, for which the physician never is paid, and this is the most baneful element, the unpaid bills of those who are well able financially to meet their obligations to their physician.

Every family doctor has a number of these every year upon his books, and if the facts and figures were recorded, of the money lost to the physicians in this way, it would stagger one and give to each a twinge of conscience.

And when one considers that the measure of the physician's service is intimate, personal and means relieving the individual of pain, suffering, the saving of a limb, aye, the saving of a life perhaps, this negligence takes on an aspect that is indescribable.

With this situation well in mind, can there be any question as to why so many physicians eke out meager existences, and that many—the majority—die without estate, and that many be-

come public charges because of financial distress?

And with the costs of living rising like the tides, is it any wonder that so many of them are engulfed and have to enter almshouses, or that those capable of it have to seek employment in other lines in order to maintain themselves decently?

The Men of Pure Science

Again, there is an aspect to the situation which presents a problem that never can or will be solved in the approach that is being made to solve problems of similar kind these days; that is the problem of the man of pure science—the man who devotes himself to the science of medicine and employs his time digging and delving in the laboratory to seek some panacea for the existent ailments of life, or who, built in more heroic mould, submits himself to the torture of disease through inoculation, that he may record the symptoms, and that his brother physicians

may record the progress of disease in him, so that mankind may be benefited as the result of his sacrifices and studies.

To evaluate this service to the physician is something beyond the power of figures, or dollars or cents, because there is the jeopardy of life always, and who can say as to the value of a life given in this manner?

The next element is that of the man who through pure service to the public is stricken down, who has to leave his bed at the call of the patient at unseemly hours; who answers call after call in this manner, totally unmindful of his own physical well-being, knowing only that some one is suffering and that his duty is to relieve that suffering. When this man becomes aged, penniless and is incapacitated from going the daily round of the old family doctor, should there not be some place to which he may go; some place to which his eyes may turn in hope and solace?

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Nursing staff consists of graduate nurses only.

And then as to the good wife, who has shared his burden through life, and whose warnings and entreaties have fallen upon deaf ears, the only call being heard being that of service,—what is to become of her? Is she to be sent to the poor-house over one hill, and he to be sent to another over the other hill, and thus these twain parted at a time of life when the affectionate companionship of years should solace their few remaining days?

Is this to be their lot?

What is to become of the vaunted ethics, the service and the pride of the medical profession if this be permitted?

To take care of one's own is a natural impulse; to take care of others is called charity, but to take care of those who sacrifice their health, their strength, their service, in behalf of the public or in behalf of their profession—this calls not for charity, it is a call to duty.

Today there is reported a dearth of physicians throughout the country. There are hundreds of communities where one doctor has to serve many such.

The poor compensation, bad debts, unseemly hours, the personal hazards to health, limb and life do not compensate a physician these days as against other professions, so doctors are becoming fewer proportionately in the rural districts.

And this is no wonder, because according to the American Medical Association, from figures printed sometime ago, \$1,000 was the average earnings of a doctor.

And, of course, it is beyond question as to a man being able to support himself, and make his daily rounds on such a basis of compensation—much less to maintain a horse and carriage or an automobile, and a family and a home thereon.

All these problems have been revolving in the minds of certain forward-looking physicians for several years, with the result that a little experiment, or adventure, was begun up in the hills of Canadea, New York, where there was established a trial unit of a home for aged and superannuated or ailing

physicians and their wives. For four years this institution has been doing its mission of mercy and love, and now the calls upon it are so heavy that it seems due the medical profession to found a home, national in scope and service; a place where tranquility will be theirs during their last few years of life.

And as planned by these physicians, it serves a double mercy in that it does not separate the physician from his good wife and life partner at this crucial time in their existence. Provision is made for both at the home, and the fact that it has worked out successfully adds flowers to the benison.

That this national home had not been thought of before, nor had not been actually started before, is due to the diffidence of the profession in its personal affairs—it did not wish to lay bare to public scrutiny that so many within the profession are needy, or may be in actual want.

But when the facts were laid before some of our leading and far-seeing citizens the reply was instant that something must be done, and that they would sponsor the movement to raise funds for the national home.

Here are gathered a few of the words of encouragement and God-speed, which have created this enterprise, from the pens of leading citizens.

If after reading them you feel that you would like to help in this great movement by your personal gift, please forward the same by check, drawn to the order of the Physicians' Home, Inc., and mail it to Dr. Albert G. Weed, Treasurer, 22nd floor, Times Building, Broadway and 42nd Street, New York City.

"It is hardly necessary for me to say that I am in sympathy with the movement to establish an endowment fund for the Physicians' Home, and I shall be glad to have you use my name as one of the sponsoring committee."

Charles E. Hughes.

"Our physicians are soldiers of our civilization in the highest sense. It would be difficult to measure what their services mean to humanity. The movement to provide a home for worthy phy-

sicians in need and in distress is one which should have the support of every American citizen."

Morris Sheppard,
U. S. Senator, Texas.

"The movement seems to be a most worthy one and, if the use of my name will be of service, I will be glad to have you make use of it accordingly."

Clark Howell, Editor,
The Atlanta Constitution.

"I heartily approve of the movement for an endowed home for physicians. It is one of the things that I have thought of a great deal. I shall be very glad to be numbered among the sponsors of this splendid movement."

F. M. Pottenger, M.D.,
Monrovia, California.

"I shall be glad to act as a member of this committee."

W. P. Bowers, M.D.,
Managing Editor, Boston Medical & Surgical Journal, Boston, Mass.

"May you have every success in the work in this most meritorious endeavor."

Alice C. Robinson,
Publisher, Medical Review of Reviews.

"I know of no profession which gives as freely of its time and resources for the benefit of others as does yours. The plan of erecting and maintaining a home where aged and infirm physicians can live under dignified and cheerful surroundings is noble in its conception and deserves public support. I should be very glad to be of assistance in every way within my power."

George Gordon Battle.

"I shall be pleased to serve on the sponsoring committee of the physicians' home, and if I can in any way aid you, I shall be delighted."

Gregory Stragnell, M.D.,

Editor, Medical Journal and Record.
"I will be very glad to be one of your sponsors, as I believe in your endeavor."

Alexander Lambert, M.D.,
New York City.

"I wish to say that I am thoroughly in sympathy with the idea of the home and it will give me great pleasure to

serve on the committee."

Evarts A. Graham, M.D.,
Washington University, St. Louis, Mo.

"I have long felt that the profession should make some provision for those who have 'fallen by the wayside.' I believe that such a movement could be successfully financed through the profession alone, and I am convinced that there are thousands of good people, outside the profession in this country, who will willingly contribute to the promotion of such a project."

A. R. Mitchell, M.D.,
American Medical Association, Lincoln, Neb.

"You have asked me to become one of the sponsors of your committee, which I accept with a great deal of pleasure, and I trust that as time goes on, I may be of some use to the committee."

M. W. Ireland, M.D., Major General,
The Surgeon General of the Army.

"I am glad to note that there is a movement on foot to establish a place where aged, indigent or decrepit physicians may end their days in tranquility,

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U. S. P. H. S. Report

Surgeon General Cumming repeats the warning he gave last year as to the danger of the lowering of standards of health in the United States which may possibly result from over confidence and relaxation in vigilance in public health work. He also points out the fact that a material increase in the population

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produces a marked tendency to a more than corresponding increase in sickness and death, and states that this increase will surely follow unless rational, proportionate measures are enforced to prevent it. Had we not learned how to prevent, in great measure, many of our communicable diseases, and were we not provided with the means of applying known preventive measures, our population would be swept from time to time by epidemics, which because of our present congestion, and better facilities for rapid transportation, would make past epidemics seem mild in comparison. The people of the United States, in so far as the national health is concerned, have grown into a body-compact comparable to the human body, no member of which can suffer without affecting the well-being of all.

With the cooperation of the State Department, State and local health authorities and other agencies, the Public Health Service has developed a very comprehensive system for the collection of world statistics of disease, which, the Surgeon General says, however, is capable of much greater development.

The most important event in the field of international health relations during the fiscal year was the signing of the Pan-American Sanitary Code by eighteen of the American republics at Havana, Cuba, on Nov. 14, 1924. This pact provides for the collection and distribution of information concerning the prevalence of communicable diseases and prescribes and standardizes the measures necessary to prevent their transmission from one country to another. By its terms, the Pan-American Sanitary Bureau is made the central coordinating sanitary agency of the republics of the Pan-American Union. To date, the Code has been ratified by the United States, Costa Rica, Cuba, Chile and Peru, and its acceptance by the other signatory is expected in the near future.

Contrasting the relative freedom from the major quarantinable diseases (smallpox excepted) which we nonchalantly enjoy in this country, and emphasizing the protection which the quarantine service and the application of the

principles of modern health measures give us, are certain figures from reports of foreign countries. Although these data are said to be, in most instances, incomplete and often fragmentary, they are nevertheless astounding to us in this country who rarely hear of some of the diseases mentioned.

Cholera was reported in many parts of Asia, but with the exception of eight cases in European Russia, this disease was not reported from other countries. India reported more than 276,000 deaths from this disease during the calendar year 1924. This is nearly four times the number reported for 1923.

In spite of the fact that the measures for preventing smallpox are well known and very effective, this disease continues to be widespread and destructive. Incomplete reports from 62 countries included 218,000 cases and more than 50,000 deaths from smallpox during the calendar year 1924. The same countries reported 165,000 cases of smallpox and more than 45,000 deaths during 1923.

The warning issued by the Surgeon General in July, 1924, regarding the menace of smallpox in the United States proved amply justified, since reports from 35 States for the calendar year, 1924, showed an increase of 75 per cent in the number of cases and 628 per cent in the number of deaths as compared with the year 1923. *The smallpox case-rate in the United States is at present, according to reports received, the highest of any civilized country in the world.* It may be said however that much of the disease is of a mild type and in some countries many of these cases would be classed as "alac-trim." It is also believed that smallpox is better reported in the United States than in most other countries. Eleven cases of tetanus, most of them fatal, occurred in the United States during the year as a result of the use of bunion pads as vaccination dressings. Efforts are being made to induce physicians to follow a standard technique when vaccinating, and warnings were issued against the use of shields and bunion pads as dressings.

Bubonic plague has been widespread throughout the world for many years. During 1924, reports of this disease were received from 49 countries, including cases in many important ports and shipping points. More than 400,000 deaths from plague were reported in Asia, and there is little doubt that many more occurred. Nine countries in the Western Hemisphere reported plague including the United States. The ever present menace of plague has been frequently emphasized in previous annual reports of the Surgeon General. Rodent plague re-appeared for a short time in New Orleans, Louisiana, and in Oakland, California. In both instances, the Public Health Service was asked to assume direction of measures for its

suppression and did so at once. No human cases occurred either in New Orleans or in Oakland.

There was an outbreak of plague in Los Angeles, California, in which there occurred 33 cases of pneumonic plague with 31 deaths and 8 cases of the bubonic type with 3 deaths during the fiscal year. Both rat and squirrel plague were also found to exist. The Public Health Service assumed charge of plague suppressive measures in Los Angeles just before the close of the fiscal year.

The occurrence of rodent plague in New Orleans, La., and Oakland, California, and of human and rodent plague in Los Angeles, California, made it necessary for a time to put into effect outgoing quarantine measures in these cit-

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ies to prevent the infection from being carried to other States and to foreign countries.

Thanks chiefly to our State and local health officers, general health conditions in the United States continued good. Preliminary figures indicate a total death rate for the United States for the calendar year, 1924, of about 11.9 per 1,000 as compared with 12.4 in 1923, with 17.6 in the registration area in 1900 and with 19.8 in 1880.

Birth rates in 25 States show an increase from 22.3 per thousand population in 1923 to 22.5 in 1924. The rates varied from 31.6 in North Carolina to 16.1 in Montana.

While infant mortality has shown an appreciable decrease, the number of deaths of mothers incident to child-birth has shown but little change in the last nine years for which data are available. During the period from 1915 to 1922 inclusive, it is estimated that for every 100,000 babies that were born, the lives of from 600 to 900 mothers were sacrificed. About one-third of these deaths were caused by infection of the mother at childbirth, often the result of carelessness on the part of the attendant.

Attention is called to the increasing number of deaths and injuries from the operation of automobiles. The death from this cause has risen from less than 1 per 100,000 in 1906 to nearly 15 per 100,000 in 1923, or more than 16,000 deaths per year.

Reports from 36 States show that 111 persons were killed and 1,030 injured

as the result of celebrating with fireworks the Fourth of July, 1925. Of the injured, 148 will probably lose the sight of one or both eyes. In many cases, injury or death was due to fireworks considered harmless, such as sparklers, blank cartridges cap pistols, sky rockets, small firecrackers and Roman candles. The publicity campaign carried on by the physicians and the press of the United States against the use of fireworks on the Fourth of July had been almost discontinued, as it was thought that warnings were no longer required. The campaign should be renewed.

Heart disease ranks first in the United States as a cause of death, and its incidence is steadily increasing. Influenza and pneumonia combined occupy the second place.

The diphtheria death rate has shown a striking fall from 43.3 per 100,000 in 1900 to 12.1 in 1923. "If parents could be induced to protect their children by the use of the "toxin antitoxin" process of immunization," says Surgeon General Cumming, "there is no reason why diphtheria might not be still further greatly reduced or even exterminated."

Lethargic encephalitis (sleeping sickness) is apparently increasing in the United States at the present time. In 1923, nearly 2,000 deaths were reported. Data are unsatisfactory, due to imperfect or incomplete reports.

Malaria is stated to be inadequately reported. There are many sections that are relatively free from this disease, while in many others it is still a

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serious health problem. The rates are higher among the colored than among the white population. Active work in cooperation with State and local health authorities in the effort to combat this disease continues to be carried out.

The death rate from measles has shown but slight change during the last quarter of a century. The inability to control measles, Surgeon General Cumming attributes, in great measure, to the fact that there usually elapses a period of about four days from the time of the appearance of the initial symptoms to the time of the appearance of the eruption. Measles is communicable during this stage. The child is not infrequently at school during a part of this time. Many mild cases are never seen by a physician and are never reported. Failure to enforce quarantine measures during the pre-eruptive stage and failure to isolate unrecognized or unreported cases greatly increase the opportunity for its spread. More rigid school inspection, with the exclusion from school of children who have fever, colds, or who are otherwise indisposed, would remove from contact with other children many incipient cases. Recent scientific research suggests the possibility of producing an immunizing process in this disease.

Although scarlet fever has shown a slight increase in the number of cases reported in 1923 over 1924, the death rate has correspondingly decreased. It is believed that this apparent increase in the number of cases is due to better re-

porting of the disease.

Little progress has been made in the control of whooping cough during the last 25 years. It is a disease that particularly affects children, especially very young children. One-half of the deaths caused by whooping cough occur in children under one year of age and 94 per cent in those under five years of age. The education of parents with regard to the extreme danger of whooping cough in very young children is strongly advocated.

The death rate from tuberculosis in the registration area (all forms) dropped from 201.9 per 100,000 in 1900 to 93.6 in 1923. Reports from 35 States having a population of nearly eighty-eight and one-half millions give a death rate of 88.6 for the calendar year 1924.

It is pointed out that at the beginning of the present century the control of typhoid fever seemed almost as hopeless as does the control of measles or influenza at the present time. The application of measures for the purification of water and milk supplies, the exercise of vigilance in protecting other foodstuffs, with prompt recognition and treatment of cases and supervision of carriers have given a most striking object lesson in the result of intelligent effort applied to the protection of the public health. The typhoid death rate has decreased from 35.9 per 100,000 population in 1900 to less than 7 per 100,000 in 1924. In the original registration area, the typhoid rate dropped from 31.3 in 1900 to 3.6 in 1923 and provisional figures for 1924 in-

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dicating that there was no rise in these States for the latter year. It must be said however, that reports for the first half of the calendar year 1925 indicate that typhoid fever rates for 1925 may exceed those of 1924.

A study of the vital statistics from 1900 to 1923 shows a marked increase in the number of deaths caused by cancer in the original registration states. During the same period, the death rate from diabetes has almost doubled.

"The importance of milk as a food and the danger that it may convey disease cannot be overestimated," says Surgeon General Cumming. The widest variance has existed in the methods adopted by State and city health authorities to secure a safe and wholesome milk, hardly any two States or cities attacking the problem in just the same way. An attempt is being made to unify measures for the safeguarding of this important food. At the close of the fiscal year 1925, eight States and fifty-three cities had adopted uniform measures for the sanitation of milk.

Studies in Child Hygiene have continued to emphasize the importance of the correction of abnormal conditions found at the school age, such as defective vision and teeth, diseased tonsils, and adenoids. It is estimated that sickness causes the child to be absent 4 per cent of the possible days of school attendance, the common cold being the most frequent cause of absenteeism.

During the winter of 1924-1925 an excessive prevalence of typhoid fever was noted in certain cities. In one of these cities, the authorities attributed this increase to infected oysters. The publication of this statement throughout the country before the exact source of the oysters was determined led to a marked falling off in the use of oysters and resulted in a considerable financial loss to the oyster producers and workers. The Public Health Service conducted a thorough investigation, definitely traced the infection to shell oysters, and located the distributing point from which the infected oysters came, thereby relieving the whole trade of suspicion and protecting other distributors.

The Surgeon General called a conference in the interests of both the public and the oyster producers and resolutions were adopted to serve as a basis for the permanent supervision of the sanitation of shellfish, the details of which are being developed by a committee appointed for the purpose. Congress made an appropriation of \$57,600 for this work. The end result will no doubt be better protection for both producer and consumer.

Other important investigations were effected by the Public Health Service, of goitre, drug addiction in its relation to crime, nutrition, "sano-crysin" (the so-called "gold-cure" of tuberculosis), and in industrial hygiene, the latter including research on the manufacture and use of tetra ethyl lead, and ingredient used in "high power" gasolines. Of particular interest are the tests of material for use in the treatment of scarlet fever, as these have to be performed on human beings, animals not being suitable for these experiments.

An office has been established for the purpose of supplying health officials with information on current practices in their line of work. This endeavor is allied with the continued study of municipal health department activities.

The Public Health Service has continued to supply medical attendance and services of various kinds to the United States Coast Guard, Employees' Compensation Commission, Civil Service Commission, Bureau of Pensions, Light House Service, Shipping Board, Steamboat Inspection Service, Veterans' Bureau, Mississippi River Commission, Bureau of Immigration and the Prohibition Unit. The number of merchant seamen, the principal beneficiaries treated, exceeded that of any previous year, as did the total amount of all relief furnished. It costs the Public Health Service \$3.80 per day to care for each patient in hospital as compared with \$4.08 in 1923.

The National Leper Home at Carville, La., cares for 259 patients, while about 400 tuberculous seamen are treated in the marine hospitals at Fort Stanton, N. M.

The campaign for the control of venereal diseases was continued along the lines of the three-fold plan of (1) educational measures, (2) legal measures, and (3) medical measures. In the field of legal measures, progress has been very satisfactory. It is also gratifying to note that many State Boards of Health now have a permanent program of venereal disease measures incorporated with their other public health activities.

Interesting figures furnished by the Bureau of the Census are given on institutional care and custody in the United States. During 1922, the last year for which data are available, there were 78,070 persons cared for in almshouses and 348,174 persons treated in hospitals and like institutions for the insane, the feeble-minded, and epileptics, while records show that 400,000 persons go out from State and Federal penitentiaries annually. The Surgeon General invites attention to the fact that many of the inmates of the almshouses and institutions for the insane and feeble-minded are in those institutions as a result of preventable disease.

The Hospital Standardization Movement of the American College of Surgeons

(1) The American College of Surgeons is an international organization comprising North and South America, and consisting of approximately seven thousand leading surgeons, chiefly from the United States and Canada. One of its principal objectives is that of Hospital Standardization—a movement for the betterment of hospital service.

(2) Between the years 1913 and 1918 the American College of Surgeons made an exhaustive survey of all hospitals in the United States and Canada for the purpose of collecting information as to the exact conditions of hospitals in both countries. This information, when compiled and considered, revealed marked deficiencies in hospitals so far as rendering the highest type of service to the patient was concerned.

(3) After careful deliberation by experts who were thoroughly familiar with hospital and medical service there

was established a standard known as the MINIMUM STANDARD—consisting of simple, concise, definite principles adaptable to any institution, and based primarily on SERVICE TO THE PATIENT—setting forth the following requirements: (a) Efficient organization; (b) Adequate diagnostic and therapeutic facilities (such as clinical laboratory and x-ray); (c) Trained personnel; (d) Complete case records; (e) Competent supervision and check-up or medical audit of the clinical work at regular periods through staff conferences, consultations and other means.

(4) The standard, as briefly described above, has been presented annually for eight years to the active general hospitals of the United States and Canada. This has been done through personal visit of a specially qualified representative to each hospital. The purposes of this visit are: (a) to familiarize hospital trustees, executives, personnel, medical staffs or others concerned, with the requirements; (b) to make a survey of the institution to determine how closely it is complying with the requirements; (c) to render every possible assistance required to the management of the institution for the purpose of in-

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creasing administrative and scientific efficiency; (d) to keep up the interest and enthusiasm for development and progress, as well as to prevent the institution from slipping back. This is all done at no cost to the hospital, the entire expense being borne by the American College of Surgeons.

(5) During the past eight years the College has spent approximately one-half million dollars on this work. The results have been most gratifying, as is evident from a study of the following table showing progress made between the years 1918 and 1925:

Eight surveys of hospitals 100 beds and over:

Year	Hospitals Surveyed	Hospitals Approved	Percentage
1918--	692	89	12.9
1919--	692	198	28.6
1920--	692	407	58.8
1921--	761	573	75.3
1922--	812	677	83.4
1923--	870	751	86.2
1924--	961	831	86.5
1925--	995	879	89.3

Four surveys of hospitals 50 to 100 beds:

1922--	812	335	41.3
1923--	916	430	46.9
1924--	973	508	52.2
1925--	952	535	56.2

Two surveys of hospitals 35 to 50 beds:

1924--	307	49	15.9
1925--	327	60	18.3

Noted authorities on hospitals state positively that as a result of this work hospitals generally have increased over fifty percent in efficiency during the above period. This has been due, in a great measure, to the constant stimulus of the Hospital Standardization movement which sets forth definite minimum standards upon which maximum standards can readily be built. Thus, material progress can readily be traced from year to year as these institutions are visited. It is also stated by authorities that one thousand inefficient or below standard hospitals have closed their doors, but over eight hundred modern, up-to-date above standard hospitals giv-

ing real service in accordance with present day requirements, scientifically and administratively, are taking their place. The movement is looked upon with particular favor in foreign countries as South America, New Zealand, Australia and China.

(6) The annual survey embraces every active general hospital of thirty-five beds and over in the United States and Canada, numbering this year approximately twenty-four hundred. This group includes the federal hospitals of the United States Army, Navy, Public Health, Veterans Bureau and National Homes for Disabled Volunteer Soldiers.

(7) The American College of Surgeons publishes a list of approved hospitals annually. This very frequently serves as a guide to patients when seeking hospital service, knowing that in the approved institutions they are assured of everything that is ordinarily necessary for their comfort, safety and efficient treatment. Already the American Railway Association has urged its 14,000 surgeons to select for their patients hospitals approved by the American College of Surgeons. In addition, this approved list of hospitals is of value to young women wishing to train as nurses, and internes desirous of obtaining experience in a good hospital. Further, many of the philanthropic and governmental organizations called upon to assist hospitals financially are influenced in their decisions to a certain extent by learning whether or not the hospital concerned is on the approved list.

(9) The generous financial assistance of the Carnegie Foundation in the early years of this work made it possible not only to commence the movement properly, but to lay well the foundation of a greater movement than was realized at that time. During the first five years of this work, the Foundation contributed the sum of \$105,000 to augment the \$195,000 provided by the College, making a total of \$300,000 spent on the program of Hospital Standardization up to January 1, 1923. Since 1923 up to the present time the College has spent approximately \$200,000,

making a total of \$500,000 during the past eight years. The College is now spending over \$75,000 per year on this work.

(10) The ultimate aims of Hospital Standardization and what is now being accomplished are: (a) the shortening of the average number of days the patient stays in the hospital; (b) the elimination of incompetent and unnecessary surgery; (c) the reduction of infections and complications; (d) the lowering of the hospital death rate. It is undoubtedly true that the days stay of patients in hospitals has been greatly lessened, dropping from seventeen to eighteen to twelve or fourteen in the past five or six years. It is also interesting to note that the amount of surgery done is considerably less and the quality much higher. This is due to better means of diagnosis, increased number of consultations, group study of clinical conditions, and more modern technique and

procedures. Formerly many abdomens were opened in order to make the diagnosis, but now the splendid clinical facilities in hospitals enables the surgeon, physician or specialist to make his diagnosis more accurately rather than by resorting to any radical procedures to secure the information. Through better supervision and check-up and improved technical procedures the number of infections and complications in hospitals has been very noticeably decreased. Finally, and by no means of least importance, is the fact that hospital death rates, which were formerly forty to sixty per thousand patients treated, have dropped to thirty, twenty and even less in some instances. Thus, in every way hospitals today have become a greater public service in being brought to the maximum point of safety and efficiency so far as our present knowledge of medical science and hospital service can be applied.

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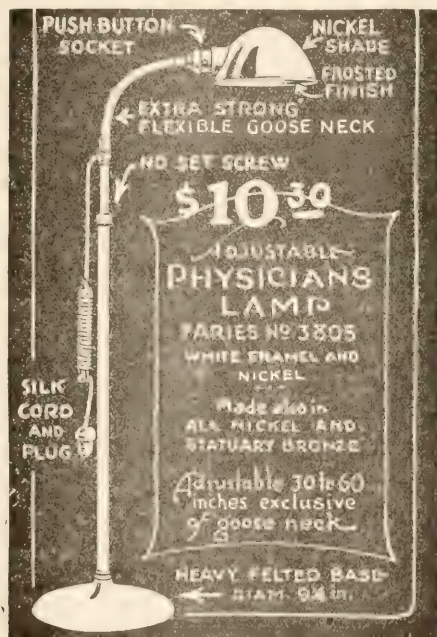
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Southern Medicine and Surgery

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CHARLOTTE, N. C., FEBRUARY, 1926

No. 2

A MESSAGE FROM THE PRESIDENT OF THE TRI-STATE.

The Twenty-Eighth annual meeting of the TRI-STATE MEDICAL ASSOCIATION of the Carolinas and Virginia is almost upon us. It will take place at Fayetteville, N. C., February 16th and 17th. A fine program has been prepared for the professional meetings, and the local committee of arrangements is doing everything to make your stay both profitable and pleasant.

There is no vacation that a medical man can take that is so helpful as a trip to a good hospitable city with a good Medical Association in session. It is not principally the social contacts and good fellowship that rests his mind and cheers the inner man, but he has the opportunity of listening to papers that good men have labored hard upon in the making, and to hear the discussion of these papers by the best minds of three States. It is good to get the views of other men, especially of men who do not agree with us; in fact, one often gains more in the discussion of a paper than in the paper itself.

The coming session promises to be one of the best that has ever been held by the best of all Southern Societies - the Tri-State. Do not come alone, but persuade your most active and busy friends to come along with you; they can join and participate in the meeting. It is a body of active busy men, and they will feel at home at once and thank you for bringing them.

Hoping to see you all at Fayetteville, February 16th and 17th, I am

Very cordially yours,

W. LOWNDES PEPLE, President.

THE CONFESSIONS OF A THERAPEUTIST, OR SOME
MEDITATIONS ON MODERN THERAPY

CHARLES L. MINOR, M.D., Asheville

"If a physician would cure he must first correctly diagnose, then wisely prescribe, and then inspire hope."

When I graduated in 1888 the wonderful developments of modern medicine were but just beginning, and diagnosis had not reached the point where its accuracy and wonders overshadowed treatment, and the student was taught to believe that he could so use drugs as to cure disease or at least alleviate suffering. The pharmacological laboratory was a new thing and drugs were still largely tested out at the bedside, often crudely enough, and we left college believing that they were valuable things, and that the cure of disease was our chief aim, and an attainable one.

Today many of the students of our best medical colleges complain, very rightly, that they are not taught to treat disease, despite their splendid courses in the pharmacological laboratory, and when you follow the ward rounds of some of the best-known professors of medicine and see their keen interest in diagnosis and their utter skepticism as to the value of therapeutics, you do not wonder that on graduation their students have little knowledge of the use of drugs or else have less faith in them. In my hospital days in old St. Luke's in New York, our attendings knew how to use drugs effectively, and, watching and imitating them, we gained that essential thing to a doctor, a faith in our weapons and a belief that we could do something for our patients by their use. Later however, in the wards of the Vienna Hospitals and in Germany, I came under the influence of that therapeutic nihilism which prevails there. A most careful and scientific diagnosis was the chief aim of the doctor's efforts and thereafter the patient was left to the healing power of nature and drugs were scarcely used at all. Indeed, each death was hailed as an opportunity for an autopsy to prove the correctness of the diagnosis.

Doubtless this nihilism had one good effect on us, in that it tended to prevent

us from too blindly trusting to drugs, but when I began my practice and stood by the bedsides of sick patients, I found I could not leave it all to nature. I found that the best diagnosis was of little use unless it lead up to an active, resourceful treatment; unless I understood the use of drugs, and that moreover my familiarity with them had a distinct value in giving me that confidence in myself without which a therapeutic result cannot be had. By degrees I built up a belief in certain medicines and therapeutic measures based partly on study, but far more on my experience at the bedside, where for years they had stood me in good stead. Doubtless some may have worked chiefly by suggestion; doubtless my therapeutic deductions may often have been faulty, but at least the drugs seemed to me to work, and I felt that I was being of use to my patients, and, like all doctors, I probably buried my mistakes.

But I must confess that, as the years have passed, and everywhere I have met that spirit of skepticism as to the value of drugs which has spread so generally in our country, a skepticism which necessarily develops in an ultra-scientific era, I find my confidence in the trusted weapons of my profession weakened. All of us, even the most independent, are bound to be influenced by our intellectual environment; the spirit of our age must inevitably more or less dominate our thinking, and I find that on account of this I am today a less resourceful therapist than I used to be. Such a recreancy to my well tested faith rests on my conscience when I look back over the list of my favorite remedies and realize how much less surely I use them and how seldom I avail myself of drugs which have stood me in good stead in the past, and which I have good reason to trust. I find it easy to doubt my ability to do something positive, to fear lest the

result I attained was but an example of that celebrated fallacy "Post hoc ergo propter hoc" and that if I had done nothing the patient would have done as well. It is unquestionably hard to prove that any effect follows on a special cause, and the doubting sneer of the nihilist leaves us less able to use effectively old and trusted friends. An unreasoning faith leads to superstition, but too much skepticism leads to a doubting frame of mind that sterilizes all our efforts.

The spirit of Germany has for the past forty years too much dominated American medicine, and while we owe that nation of patient, painstaking investigators an enormous debt for the spirit of research they have handed on to us, we also owe them a grudge for that spirit of hopelessness in therapeutics which our students have brought back from their schools, and it would have been well if in therapeutics we had been more influenced by the practical common sense which has always characterized English clinical medicine, which strikes, as I believe, a happy mean between the polypharmacy of France and the nihilism of Germany.

I know very well that a pure scientist must always question and doubt and seek for absolute truth, but medicine will never be a pure science, but will remain an applied science and also be in part an art, and the extreme skepticism of the pure scientist is as out of place and harmful at the bedside as was the crude empiricism of an earlier time.

It is possibly a matter of relatively little importance if we older men become poorer, less resourceful therapeutists, but it is a very serious thing for the profession if our young graduates take up the practice of their calling with a poor knowledge of drugs and little faith in their use. How absurd does it seem that we should spend large sums of money in developing medical schools to turn out men who too often do not know how to treat disease, or who are ashamed to admit a faith in drugs.

Not seldom has a regret of this condition been voiced in the meeting of the Association of American Medical Col-

leges. As Dr. Cutter said at a recent meeting of a great association: "Emphasis on therapeutics is inadequate Rarely are clinical teachers with therapeutic bias appointed to give clinical lectures." And why, may I ask? Because research has been so unduly stressed and therapy so scorned that the man who is interested in therapeutics is looked down upon and discouraged. No one who keeps up with the profession, but is familiar with the brilliant additions to our therapeutic measures, by the bacteriologists and to a smaller degree by the chemo-therapeutists, and knows the many things coming out of the pharmacological, chemical and biological laboratories, some of which are invaluable and permanent additions to our armamentarium. But while we all value the work being done in our laboratories, we should not allow them to cause us to take a scornful attitude toward those older and long-tested drugs whose use rests at present on a purely empirical basis.

When we consider the foundations on which rest our confidence in any drug, we recognize that, even after many years of personal experience, that confidence needs to be tested out and justified by the laboratory if possible, but until that is unimpeachably done the bedside experience of a careful physician is a perfectly legitimate basis for our use of a drug or mixture of drugs. Further, since we know what synergism is, we need not even fear the common accusation of shotgun prescribing if we make a rational combination of drugs in which one will reinforce the action of another, or of empiricism if we allow our personal experience to guide our therapeutics. What, after all, is medicine but the application of accurate observation, and its child, experience, to the cure of disease, whether this observation and experience be in the laboratory of pharmacology or at that great medical laboratory, the bedside. The important thing is that we be trained to observe the effect of drugs accurately and to use that experience judiciously and wisely, and to keep careful records,

so that we can draw therefrom justified conclusions. An excellent example of the way bedside observations should be carried out in therapeutics is given in an article by Boots and Miller in the *Journal of American Medical Association* for March 29th, 1924, on page 1028 on "Neo Chincophen in the Treatment of Rheumatic Fever." Here we have the sort of bedside study which yields valuable and worthwhile results and which is just as creditable to its authors as any pharmacological study, but until our colleges prepare our students for such work by the bedside teaching of therapeutics few men are likely in their practice to do the careful observing and recording, from which reliable deductions such as this can be drawn. If we could get more such work done in our medical schools and hospitals, and if possible in private practice, we would see a real awakening of an interest and confidence in drugs which we and our patients at present badly need. It is only after such carefully made and accurately recorded observations have given us a reason for our faith in a drug, that the pharmacologist should come in and try to find experimental laboratory proof of our empirical deductions; and if the laboratory differs from the bedside result this is not a reason to reject what experience seems to prove valuable, but only for renewed and more careful combined laboratory and bedside work, for the pharmacologist can only get good results by working in close co-operation with the clinician. It is then a plea for high grade and careful bedside empiricism that I would make, with the laboratory occupying a secondary, though no less honorable place, in teaching students how to treat disease, and with practical courses in the bedside use of medicines so as to turn out our students ready to intelligently handle the cases they will have to treat, and not with that ignorance of therapeutics which is today so common.

No better example of the right sort of empiricism can be found than the history of the development of our knowledge of digitalis, which has slowly evolved from the very crudest sort of

empiricism to a point where it rests on the fullest and most carefully made bedside observations, backed up by the most careful pharmacological work. No one denies the value of digitalis today. Yet in its beginning it rested solely on the experience of a family of simple countryfolk in Shropshire, England, who in some way at some past time had found out that fox glove was good for dropsy and had passed this knowledge down in the family from generation to generation as a secret remedy. Dr. William Withering in 1775, hearing of its successful use by these country people, got the prescription with difficulty and, looking it over, decided that, of the ingredients, fox glove was probably the active one. Then he, an unknown country doctor, blessed with a keen spirit of careful clinical observation, began a patient investigation of it at the bedside, first in the country, and later in a large hospital in town. To quote his own words: "I soon found the fox glove to be a very powerful diuretic, so I ventured to assert that digitalis purpurea merited more attention than modern practice bestowed upon it." Most doctors in those days, doubtless most men today, would have made a few slipshod observations and drawn some unjustified and valueless conclusions. He instead carefully studied and worked out a hundred and sixty-three cases, which he reported, and also did much work on the dosage and indications, and drew from all these observations certain inferences as to its value. He got the great Stokes and other good men, on his recommendation, to test it out, and by 1783 it was officially recognized in the *Edinburgh Pharmacopoea*. Thus, without any laboratory work and with simple, accurate bedside testings, this drug won for itself a recognized place and for a long time was a boon to mankind before pharmacology was born. Since then pharmacologists have tested out its action scientifically, studied its composition and components and given the reasons for its effects, until today it is a fully and rationally proven drug.

Quinine is another empirical remedy

discovered by ignorant Peruvian Indians, winning its place on the strength of practical results in treating chills and fever, and which was so used for centuries before the advance of medical science placed it on a firm basis.

As to many other empirically used drugs however, we have not yet been able to demonstrate how they work or their real scientific value, and yet the experienced physician knows he can rely on them and uses them with results. Thus calomel, which we have long called a cholagogue, is declared not to be one by the pharmacologists, and yet we know perfectly well how valuable it is to us in many intestinal toxemic conditions, and use it with effect.

Thus, out of empiricism have come many of our most valued drugs, and it would be extremely unwise to reject all of whose value we have no experimental evidence. What we need today is not so much more men to do pharmacological work, useful as that is, but that all our students should be better trained in the use of drugs so that, like Withering, they can at the bedside give satisfactory clinical proof of their value. Such empiricism as this is justified and useful, much as the pure scientists may decry it, and I trust we are going to see more and more a return to studies such as he made. On the other hand, the doctor must not be too ready to receive every new remedy without satisfactory bedside testing, and he has every reason to doubt so-called scientific reports brought to him by interested commercialists. Would that it were possible for all doctors to follow out such a system as that used by Withering or by Drs. Boots and Miller, and test out for themselves new remedies, rather than to accept, as is now so commonly the habit of the profession, the dictum of some traveling salesman or the literature of our enterprising drug firms. Indeed I feel very sure that these same salesmen would have had no chance to get the hold that they have upon the profession if education in therapeutics in our medical schools had been more satisfactory in the past. No one would want to return to the days of

crude empiricism, but many feel that we have gone too far in our reaction against it and have lost that resourcefulness in our use of drugs, which the great clinicians in the last half of the last century possessed. We have unquestionably today too many physicians who, after the diagnosis is made, merely look on passively and helplessly, not knowing what to do and trusting to the much overworked "*vis medicatrix naturae*" to pull their patients out of the ditch.

Years ago, in the clinic of a great medical school, I saw a good example of the different attitude toward disease of the ultra-modern physician and that of his great predecessors. A keen diagnostician demonstrated the interesting case of an old dicky with faultless thoroughness and, doubtless considering treatment useless or hopeless, and forgetting the value of suggestive therapeutics and his duty as a doctor to hearten his patient, dismissed the class without laying out any plan of treatment, leaving the impression on their minds that diagnosis was alone valuable. When the patient saw the doctors going away and nothing done for his malady he called out plaintively: "But—doctor, what is yo' going to do fo' me?" This physician deduced the inutility or unimportance of treatment for this case, thought of it merely as a "case" for diagnosis, (which is the almost universal habit in Germany) and not as a suffering human being needing help, and forgot that even if this deduction of his was right, he had still failed to be humane, or to consider the psychology of the case, or to remember that to encourage the discouraged, to hearten the hopeless, even if but with a placebo, is no mean or negligible part of the doctor's work. Patients come to us hoping that we can do something for them, and not merely to give us an opportunity for scientific study of their interesting cases, and we have not done our duty by them until by drugs, by other measures, by suggestion, by building up hope, we have helped to cure them or at least aided them to meet the end bravely. The public are today so well edu-

cated in medical matters that many of them realize the value of care in diagnosis, are willing and glad to see much time and money spent upon it, and resent the superficial examinations that used to disgrace our profession, but they also, very rightly, expect a searching diagnosis to eventuate in an effective treatment.

That many diseases can be diagnosed but not materially benefited by treatment is painfully true, but even then the doctor can be of help in keeping alive hope and in giving courage to make a brave, if even a losing fight, and too many of us today forget this. As my text implies, the proper handling of a case means not only a keen diagnosis, not even a well-planned treatment, but, and let us never forget it, if we doctors are to be of real help at the bedside, sympathetic, comprehending human beings and not merely cold scientific observing machines, it also means the building up in our patients of a hopeful, courageous frame of mind, whose effect on the final result no experienced practitioner will deny. What the profession needs today is not less scientific accuracy in diagnosis, (we cannot have too much) not less careful and painstaking research to unmask the secrets of nature, (without it medicine would die) Our attainments in these lines are the

glory and justification of modern medicine, but these are not enough. We need a more thorough knowledge of therapeutics, a greater confidence in the power of drugs to relieve and cure disease, a familiarity with their varied applications and uses, and more comprehension of the effect of psychology on the patient's fighting power and recovery, and a love for and understanding of our suffering fellow men.

We need a rejuvenation of our therapeutics. We need more men who can use drugs effectively as did Flint, and Loomis, and Jacobi, and Delafield, and many another. We need to be able to plan out clearly and with confidence an effective and rational course of treatment, but also we need to leave in the sickroom not merely effective remedies, but an atmosphere of faith and hope. Alas that the quack and the charlatan have too often realized this fact better than the regular physician. The present era of skepticism will pass, as did the era of a foolish confidence in drugs, and we will I am sure reach a time when the doctor will enter the sickroom confident in his ability to use drugs and other measures to relieve sickness and suffering, radiating strength and courage and bringing that help which it is so often the glorious privilege of our profession to give.

ENTEROSTOMY AS A LIFE SAVING PROCEDURE*

D. T. TAYLOR, JR., M.D., Surgeon Washington Hospital, Washington, N. C.

Enterostomy is one of the most valuable and also one of the most neglected operations in surgery. Even in the past few years I can readily recall a few instances in which the results would have in all probability been different had this simple little operation been employed. My few remarks here will be confined to the use of enterostomy in acute intestinal obstructions developing a few days after operation, and to mechanical obstruction of several days duration, these patients being physically unfit to undergo a more radical operation. Acute post-operative intestinal operation usually develops within the first few days following operation and most frequently occurs in drainage cases, although occasionally it develops when no drain was used. Acute intestinal obstruction developing a few days after operation may be due to an ileus or to thin weblike fibrinous adhesions which mechanically produce the obstruction. It is in this type of obstruction that enterostomy is especially indicated and can be relied upon to give very satisfactory results, provided it is not postponed too long. In cases of toxic ileus where peristalsis has been obliterated, enterostomy is not followed by as brilliant results as are seen in cases of obstruction where the peristaltic wave is active. Of course we dislike to subject our patients to a secondary operation at such an early date, but after the routine treatment for abdominal distention such as gastric lavage, enemas, etc., fail to relieve the obstruction, improvement is unlikely and enterostomy should be done without further hesitation. It is quite difficult at times to decide whether or not an operation is justifiable. A good rule to follow is "if in doubt, operate," and a considerable number of these cases will be spared.

Acute mechanical obstruction of several days duration often terminates disastrously regardless of the treatment employed. This is the class of cases

that is largely responsible for the mortality rate of acute intestinal obstruction remaining at such an embarrassingly high figure. These patients are obviously critically ill when admitted to the hospital. They usually present a pinched, anxious expression, marked abdominal distention, stercoraceous vomiting, and all the other classical symptoms of advanced obstruction. The vitality of these patients is at its lowest ebb, and any additional surgical shock superimposed upon the already profoundly toxic individual will be sufficient to snuff out the little remaining spark of life. These patients must have immediate relief if they are to survive. Any prolonged radical operation in an effort to relieve the cause of obstruction is almost sure to terminate fatally. Enterostomy under local anesthesia can be done easily, rapidly, and painlessly without any additional shock to the patient whatsoever. Quite often following an enterostomy the obstruction releases itself and recovery follows without further operation, in other instances the patient is given an opportunity to recuperate sufficiently to undergo a more radical operation with greater safety. Occasionally the first enterostomy fails entirely; if such does occur a second enterostomy should be performed immediately.

TECHNIQUE

Before beginning the operation the stomach should be washed out thoroughly to get rid of the foul toxic material that it usually contains. Under two per cent novocain anesthesia an incision is made over the most prominent portion of the distended abdomen. The abdomen is opened and if the patient's condition will permit, a search for the cause of the obstruction is made; if not the first loop of distended intestine is drawn into the wound. A purse string suture is made, the bowel is opened with a cautery, and a small rubber catheter inserted and the purse string tied. A second purse string is made around the

*Read before the Seaboard Medical Association, Norfolk, December, 1925.

first and is tied as the catheter is gently invaginated into the bowel. This tends to approximate the serous surfaces of the intestine and aids in promoting early closure of the fecal fistula when the catheter is removed. The omentum is next delivered, the catheter drawn through it and the omentum sutured to the parietal peritoneum, a procedure suggested by Dr. Chas. Mayo. This use of the omentum is a very important step in the operation. It prevents interference with mobility of the intestine and facilitates healing of the fistula after the catheter is withdrawn. Immediately upon inserting the catheter into the bowel there is an escape of a large quantity of foul smelling toxic material. The abdominal distention subsides almost instantly, the nausea and vomiting cease and the patient expresses great relief.

These patients are markedly dehydrated from the constant loss of fluids, due to persistent and prolonged vomiting, thus the urgent need of fluid is supplied by hypodermoclysis and proctoclysis until liquids can be retained by mouth which is usually possible in twelve hours after the operation. The catheter is left in until gas and feces are being passed by bowel and the abdomen is soft and flaccid, which usually occurs in two to three days following operation. Occasionally the catheter become blocked by solid fecal material. This can easily be overcome by irrigation through the tube with hot saline. The fistula closes itself in from one to two weeks after the catheter is removed. A few cases require a secondary operation for repair of the fistula.

It might be of interest to briefly summarize the end results in a small series of cases. Out of a group of nine cases in which an enterostomy was performed, five were for an obstruction developing a few days after operation. Four of these occurred in drainage cases of appendicitis in which a soft cigarette drain was used coming out through a McBurney incision.

One case of obstruction developed on the third day following a pan-hysterect-

omy for carcinoma of the uterus in which, of course, no drain was employed. For such patients recovered and one died. The one who died was a white man fifty-three years of age who had been operated upon for peritonitis following appendicitis, drainage being used. An enterostomy was done on the seventh day, four days after the obstruction occurred. I can not help but feel we postponed the enterostomy too long. An enterostomy was done in four cases of acute mechanical obstruction ranging from two to seven days duration, out of this number two died. One was a white woman who gave a history of having obstruction for seven days and who had been purged drastically. She was practically moribund when admitted. An enterostomy was done at once with no relief. A second enterostomy was done twelve hours later. She died that night. I do not feel that this woman would have survived under any circumstances. The second case in this group was a man seventy-two years of age who gave a history of having obstruction for two days. There was marked abdominal distention and stercoraceous vomiting. Enterostomy was done at once with escape of large quantity of foul smelling material. The old man improved for twenty-four hours when the distention and vomiting recurred. A second enterostomy was done on the third day with rapid relief of symptoms, feces and gas being passed by bowel; two days later the patient was taking liquids by mouth. On the seventh day the tube was removed, patient developed a cough and cold on the eighth day, and died on the eleventh. The abdomen was soft and flaccid the morning he died. Of the six cases that recovered, three required a secondary operation for closure of the fistulous tract. It is interesting to note that in two of the cases of persistent fistula the omentum was not used at the time of the primary operation. In all three cases after closing the opening in the intestine the lumen was so narrowed that the bowel was folded upon itself and a lateral anastomosis made to avoid

future obstruction. All three cases had an uneventful recovery.

CONCLUSIONS

I. In acute post-operative intestinal obstruction and mechanical obstruction of several days duration enterostomy under local anesthesia affords the easiest, simplest and most immediate relief

without any additional shock to the patient.

II. The omentum should be used whenever easily accessible. It prevents interference with the mobility of the bowel and facilitates closure of the fistula.

III. If the first enterostomy fails—do a second.

THE ROLE OF INSULIN, GLUCOSE AND BLOOD THERAPY IN THE INFECTIONS*

J. S. BREWER, B.S., M.D., Roseboro, N. C.

Formerly Resident Obstetrician Barnes Hospital, St. Louis

It has long been known that the outcome in any infection depends on the virulence of the invading organism and the vitality of the patient. For the purpose of this discussion infections may be classified in the following groups: (1) Mild infections or those in which the virulence of the organism is below par or in which it is habitually one of feeble powers. These patients recover. (2) Overwhelming infections or those in which the organism is of high virulence or invades in endless numbers. These patients are bound to die unless their vitality is unusually high or prompt and efficient therapeutic measures are brought to their relief. (3) In this group may be placed those cases in which the infecting organisms are not particularly active or in which the invasion is not overwhelming. This group is between group one and group two. These patients usually get well unless their resistance is unusually low, in which case their lack of vitality makes them seriously ill and for clinical purposes places them with group two. You will recognize that in group two every means possible must be brought forward and employed to save the patient's life. The treatment must be prompt and heroic. The problem is to meet the indications in a given case.

I speak particularly of such conditions as puerperal infections, peritonitis from various causes, dysentery infections,

general lymphatic and blood infections, especially in invasion by highly virulent streptococci, and many others too numerous to mention. It is in these seriously ill patients that the measures I shall advocate are especially needed. And here let it be understood that glucose and blood are not to take the place of the old routine treatment which is well known, but are only to be used as adjuncts to what we have been doing for years.

Glucose solutions for the purposes here employed are to be given intravenously. Sufficient amounts cannot be given by proctoclysis. Glucose solutions are employed to furnish fuel to the body. And also by virtue of being hypertonic they are diuretic and cause an increased elimination of toxins by the kidneys. And coincident to their combustion in the body the fats are burned and acidosis is prevented. In many cases the patient is unable to take sufficient food and water by mouth and in certain conditions, as in peritonitis, the administration of these substances by mouth is distinctly inadvisable. In these instances glucose solution furnishes the body with calories and water and the body metabolism may be kept going with a minimum of loss to the body tissues. As many as twelve to fifteen hundred calories may be given in this manner in the 24 hours and if the fluid requirement is high the dilution may be low and 3000 to 4000 c.c. of fluid given in this way. The dose of glucose

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is usually from 50 to 100 grams for the average adult given three to four times a day. The dilution may vary as to the fluid requirements. Where the patient is able to take some fluid by mouth a 20 per cent solution may be used. If the fluid requirement is high a 10 per cent solution may be used. As considerable quantities of fluid are indicated in these severe infections a concentrated solution of glucose should be complemented with normal saline by hyperdermoclysis or proctoclysis to bring the total fluid intake up to 4000 or 5000 c.c. in the 24 hours, unless the patient can take that amount by mouth.

The administration of the solution is important and there are three cardinal rules, which are: Chemically clean infusion sets, maintenance of temperature and regulation of the speed of injection. Disregard of any one may result in reaction. The temperature at the needle should be between 37-39 degrees C. This is obtained by immersing several coils of the tubing in a pan or flask of water at 43-45 degrees C. and maintaining it throughout the administration. The rate of injection is most important. It has been proved by clinical experiment¹ that .8 gram of glucose per kilo of body weight may be given per hour without causing glycosuria. For intermittent injections this rate may be increased. For example, 500 c.c. of a 20 per cent solution may be given over a period of approximately one hour and the glycosuria, if it does develop, never exceeds 10 to 12 grams. In case the blood sugar is raised above the renal threshold and glycosuria occurs it is of no special significance. Where large amounts of glucose are to be given or when, for any reason, the speed of injection must be rapid, insulin may be used to take care of the excess over what the body is able to utilize. One unit of insulin may be given intravenously for every 5 to 10 grams of glucose, or the expected spill over the renal threshold may be estimated and an amount of insulin sufficient to burn this amount be given at the rate of one unit for each 2.5 to 3 grams of glucose. If the rate of injection is slow or the

amount of glucose small, insulin is unnecessary. In no case should the amount of insulin given be sufficient to burn all the glucose given, for in that instance there would be no glucose for the liver and tissues to store as glycogen for later use.

The preparation of the glucose solutions will not be dealt with here except to say that only chemically pure glucose should be used and the water for dilution should be freshly distilled. The flasks and vessels are to be chemically clean, rinsed in distilled water, stoppered and sterilized in the autoclave at 15 pounds pressure for 30 minutes. If the solution is to be used within 24 hours it may be sterilized by boiling for 5 minutes.

Taking up the use of human blood, I first want to say that the citrate method of transfusion should be employed if there is any question of a blood infection, because of the danger of infecting the donor if whole blood methods are used. Unless one is sure that the infection is localized and the blood stream is not infected those methods that anticipate the use of whole blood are contraindicated. Glucose and blood are often used in the same case, but both are not always needed. A patient may require glucose and not need transfusion, and another patient may need blood transfusion and yet be able to take sufficient food by mouth to maintain metabolism to a reasonable degree.

The transfusion of blood to a seriously ill patient with a rapid, fulminating infection will in many instances save life. It may be the agent that decides the issue between life and death. Many times the patient needs an additional something to enable him to hold on, to fight the battle a little longer, until the body can develop enough vital resistance to overcome the infection. Blood is the agent that will add new strength and prompt the natural forces to carry on the fight until the battle can be won. Blood transfusion is especially needed in the overwhelming, fulminating infection that is so rapidly overcoming the patient. It will keep the patient living and fighting until his own body can de-

velop enough antibodies to combat the infection. New fresh blood is added with its hemoglobin and blood corpuscles. Antibodies from the healthy donor are given to the sick patient and his blood stream is improved. His own natural resistance is bolstered up and he carries on with renewed energy. In the hemolytic type of infection blood is constantly and rapidly destroyed and to replace this blood with fresh blood from a healthy individual is rational treatment.

In the slow, wasting type of infection the patient may have time to develop antibodies and combat the infection, but the convalescence is slow and prolonged. Repeated transfusions in this instance will build up the patient and shorten the period of illness and reduce to a minimum the wasting effects of the disease. While in this case blood is not so urgently needed as in the fulminating infection, its therapeutic value is as effective and proved.

The amount given may vary according to the patient and the seriousness of the illness, but for the average adult as much as 500 c.c. should always be given. It was our practice at St. Louis to give large amounts and repeat often, say every three to five days. Transfusion should be done early. Do not wait until everything else has been tried and the case is hopeless, but in the presence of serious infection, transfuse promptly. I have given 700 to 800 c.c. every three days for a week or ten days. If large amounts are given the patient is usually over the crest of the storm in a few days and more than three or four transfusions are rarely needed. The

temperature will gradually subside, the patient will be in good condition and convalescence will be prompt. It is sometimes surprising to see how rapidly a patient only a few days before at death's door, will recover, once the storm is over and the battle won. The blood should be withdrawn and injected as rapidly as possible. The temperature at the needle should be kept around 37 to 38 degrees C. by the method mentioned under glucose injection. Blood properly matched, rapidly withdrawn, properly citrated and given in a minimum of time will rarely cause reaction.

In conclusion, I would like to again emphasize the therapeutic value of glucose and blood, and recapitulate the following:

- (1) Glucose and blood are used to bolster up the patient's own resistance and save tissue destruction.

- (2) Glucose preparation and administration are very important, if reactions are to be prevented. Insulin may be used to take care of the excess of glucose administered over the renal threshold.

- (3) Blood is a life saver in the acute fulminating, hemolytic infection. It should be given early and in large amounts and transfusion repeated every three to four days until the disease is overcome. Transfusion in infected cases is preferably by the citrate method, and with the proper technique of administration there should be no reaction.

¹Wilder, R. M., and Sansum, W. D.: Glucose Tolerance in Health and Disease, *Arch. Int. Med.* 19:311, Feb., 1917.

THE DIAGNOSIS AND NON-SURGICAL TREATMENT OF
PULMONARY ABSCESS*

W. BERNARD KINLAW, M.D., Rocky Mount, N. C.

From Medical Service of Park View Hospital

The early diagnosis of abscess of the lung is important, not only the diagnosis of the condition itself, but the exact location must be ascertained before we can consider the proper curative treatment. For example, an abscess at the base of the lung should usually be treated differently from one at the apex, and one at the periphery will call for a different procedure than will one near the hilum. This is a disease in which the mortality, in unselected cases, ranges between 30 and 60 per cent.

A history of the inhalation of a foreign body, submersion, some general anesthetic, operation upon the upper respiratory tract, a preceding pneumonia, some chest injury (especially in a person suffering with some pulmonary or bronchial infection), will be of value in getting us to consider abscess as a possibility. The general condition and appearance of the patient will of course depend upon the stage in which we see him, i. e., whether the condition is acute or chronic, and whether draining into a bronchus or not.

SYMPTOMS: At the onset the general symptoms are those of sepsis, with a remittent fever ranging between 100 and 103 and the pulse disproportionately rapid. The white blood count is usually high. Cough is nearly always present. Sputum may be scant at the onset, and later profuse, increasing in amount as cavitation proceeds. The classical symptom of abundant sputum following a hard coughing spell, and then followed by daily expectoration of a large amount of sputum which may or may not have a foul odor, but which is brought on by a certain posture, will almost clinch the diagnosis.

EXAMINATION: The physical examination is interesting. It may be possible to determine the diseased lung by antero-posterior pressure over each side

of the chest, as the patient may complain of a dull soreness in the affected side. With the chest completely stripped it may be noted that expansion is slightly decreased on the affected side, especially if the pleura is involved. Systematic percussion of the entire chest, using both light and heavy percussion, will usually find as area of impairment, or dullness, unless we are dealing with a central abscess or one near the hilum. In the acute cases the persistence of rales at one place, or a friction rub, suggests the site of a developing process. If the abscess cavity is full, the breath sounds will be faint and whispered voice sounds faint or absent. The interesting part is to then place the patient on the unaffected side with the head lowered for a few minutes, thereby probably causing him to empty the abscess cavity. Examination then, over the same area will usually present a more resonant note, whispering pectoriloquy and cavernous breathing, and bubbling cavity rales. As most abscesses are centrally placed in the lower lobes, the physical signs are often very indefinite, so that it is essential to have stereoscopic x-ray films in order to accurately locate the position of the infection. The sputum in all cases should be examined repeatedly for tubercle bacilli, Vincent spirochetes, and fusiform bacilli.

TREATMENT: There is no so-called "regular method of treatment," because in a series of five cases it may be necessary to treat or manage each one entirely differently; except for the one factor, *rest*, which is very essential with any plan of treatment until all symptoms have subsided. The prospects of cure seem brightest in the first two months; most of the deaths occur during the first five months.

Under the heading "NON SURGICAL TREATMENT," I would like to briefly mention the following four procedures:

(1) *Postural Drainage.* As these cases sooner or later drain into a bron-

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chus, it is possible to keep the abscess cavity fairly well drained by having them assume the position that causes the most complete emptying of the cavity, for about ten minutes three times daily. The usual way to get the best result is to suspend the upper half of the body over the side of the bed in such a manner that the affected side will be a little above the non-affected side. This method is especially helpful when the abscess is in the lower lobes. It must be combined with complete bed rest for several weeks after the acuteness has subsided, to get the best results. In a recently reported series of 40 cases, I noted it was used in 14 cases with eight cures and six improved.

(2) *Pneumothorax*. This method is certainly valuable in properly selected cases, usually deep seated abscesses in the early stages. It is contraindicated in acute cases near the periphery of the lung, especially if adhesions of the pleura are present, as a tear of the lung tissue here will produce an empyema on top of an already serious condition. This type of case is best treated by surgery.

Pneumothorax is not painful. The patients do not complain of the treatment, and if carefully done, using small amounts of air so as to cause a gradual compression, it no doubt has its valuable place in treating some of these cases. The pressure on the cavity will tend to keep it empty and allow healing, later the lung is allowed to expand. It should not be attempted, however, unless the procedure can be watched with the fluoroscope, so that the operator may know just where the air is exerting its pressure.

I found in the literature that in 45 cases treated by this method, 10 died and 28 were cured.

(3) *Bronchoscopic Drainage*. This is indicated in abscesses near the hilum and especially those in the lower half of the lung. If there is any suspicion of an aspirated foreign body, this procedure should be given a trial. How-

ever, it cannot be stressed too strongly that this treatment should be carried out by one with considerable and varied experience in bronchoscopic work. Just what value the instillation of different medical agents has, I am unprepared to say, but gomenol is used, and probably is of therapeutic value. When possible, chronic abscesses should be given prolonged bronchoscopic drainage before surgery is undertaken.

(4) Neo-arsphenamine has its place in the treatment of some of the gangrenous types of cases. The washed sputum should be carefully studied for Vincent spirochetes and fusiform bacilli, and if possible neo-arsphenamine should be given in ascending doses, once or twice a week. I have recently had such a case. A man, age 54, was sent to me with the history, physical signs and x-ray findings suggestive of a chronic lung abscess at the periphery of the middle right lobe, with marked pleural adhesions. Pneumothorax was contraindicated and bronchoscopic drainage would probably not have been successful. It seemed a proper case for surgery. The old gentleman, although "handled with gloves," as it was his first trip to a hospital, decided he had rather go home and die than to have an operation. Although we did not find the spirochete or fusiform bacillus in the sputum, it was decided to try neo-arsphenamine. His Wassermann was negative. He improved after the first dose, and after six doses of .6 gm. is practically free of symptoms. I have tried to get him back for a check up x-ray, but so far with no success.

SUMMARY: In discussing the non-surgical treatment of pulmonary abscess, it must be realized that only 50 to 60 per cent of the cases will appropriately come in this class, as 40 to 50 per cent of the cases will eventually need surgery. It is important, therefore, to realize that such a case calls for consultation among the surgeon, the internist, and the bronchoscopist, with an occasional checking by the roentgenologist.

THE SURGICAL REPAIR OF HARELIP AND CLEFT PALATE
DEFORMITIES

JAMES W. GIBBON, M.D., Charlotte

Dr. John Staige Davis estimates that congenital clefts of the lip and palate occur once in every 1170 infants born in the public institutions of Baltimore. Dr. Charles Dowd of New York City on this scale shows that there are 2000 infants born each year in the United States with clefts of the oro-nasal septum. The dreadful handicap of these unfortunate children appeals strongly to our sympathy. A certain number of these patients have other developmental defects, and will succumb at an early age; while others of more vitality, will endure their hardships and grow to maturity. At the present time surgical treatment has advanced to a stage where, if carefully planned and adhered to, the deformity may be corrected, and the child's condition made satisfactory. If left untreated the child grows into adult life with a fearful blight of appearance, impaired speech, timid and sensitive, incapable of coping with the exigencies of life. Yet, one occasionally encounters parents unwilling, either from ignorance or fear, to allow their child the opportunity of having these deformities remedied. They cannot realize that in order to be most successful the repair must be done during infancy, and completed before the child learns to talk. When the treatment is undertaken parents should be made to understand that their co-operation is exceedingly helpful to the surgeon, and that their personal feelings must, for the time, be subordinated to the ultimate welfare of the child. Corrective operations are tedious, necessarily deliberate and painstaking; and parents should exercise forbearance and patience, without interfering with the efforts of the surgeon.

The views and methods of treatment discussed in this presentation are drawn from a personal experience of fifteen surgically treated cases of harelip and cleft palate, single and combined, which began four years ago when I first became interested in this type of work.

Personal experience, admittedly limited, is supported and broadened by recourse from time to time to the literature and teachings of others. Free use has been made of the opinions and operative methods of Brophy, Blair, Davis, Thompson, Dowd, Ritchie and Brown of this country, and those of Lane and Berry of England.

OUTLINE OF SURGICAL PRINCIPLES.

In the development of this type of surgery, experience has led to the adoption of certain definite principles, which are recognized by most surgeons. The following many be mentioned:

1. Very early operation is desirable in all cases
2. Operation should usually be done in several stages
3. If there is cleft in the alveolar arch it should be corrected before the bones have hardened
4. Early repair of the lip causes a desirable pressure on the premaxilla
5. In unilateral clefts the sagging nostril should receive careful attention
6. The flexibility and depth of the soft palate should be preserved with utmost care
7. In restoring the hard palate gauze packing and supporting metal plates are helpful.

Such are the essential and basic principles upon which congenital clefts of the oro-nasal septum are reconstructed. The only one about which there is any question is the seventh, which is strongly recommended by Dowd, but condemned by Blair and some others.

SEQUENCE OF OPERATIVE PROCEDURES.

Having agreed that the repairs be done in stages, what is the sequence of these operations? With the possible exception of Brophy and a few of his followers, nearly all surgeons prefer to close the lip cleft first. Of this plan, Sir James Berry is the especial champion, who finds that "the early repair

of the lip leads to a rapid spontaneous narrowing of the cleft in the palate and alveolus," and gives pictures of casts which substantiate his claim. The reasons for closing the lip first are two-fold. First, it is to secure pressure on the alveolar cleft, especially the projecting premaxilla; second, early closure of the lip cleft permits the lip to continue its normal development with the growth of the child. Having closed the lip, several months are allowed to elapse, the exact interval varying in the hands of different surgeons, when the palate is closed, first the hard and then the soft palate. During the interval from the time of the repairing of the lip to the closure of the palate, experience has demonstrated that there will be a very appreciable narrowing of the cleft in the palate, materially simplifying the palate operation. The last operation is the closure of the cleft in the delicate soft palate. Thus, as stated by Ritchie, "the balance of evidence and opinion is in favor of the lip, alveolus and palate sequence" of operations.

AGE OF PRIMARY OPERATION.

At what age should the primary operation of the lip be performed? As already mentioned above, the earlier this operation can be done the better the results, so long as an operation is compatible with the health and vigor of the baby. If one is to obtain the assistance of the normal processes of growth; if one is to depend upon the pressure of the lip to bring the projecting premaxilla into place, quite naturally this must be done early in the infant's life, when the bones of the face are soft and pliable. The earliest operation done by Down on the lip was ten days after birth. Lane thinks the first few hours after birth form a particularly favorable time for operation, since the infant is still in a favorable condition for enduring trauma, a condition which nature has apparently provided to insure a safe birth. Sherman prefers ages of three or four months, and a weight of about fifteen pounds. Most surgeons will operate when they consider the baby is in a

condition to withstand an operation of this character. Commonly, as remarked by Dowd, "it is definitely a question of surgical judgment." The youngest baby operated on for harelip in my series was two months of age. As a rule the baby should be gaining in weight, the hemoglobin should not be less than eighty-five per cent, and there should be no evidence of acidosis at the time of the operation. It is sometimes wisest to refer the baby to a pediatrician prior to operating, as it is extremely important that the baby be in the best possible physical condition. The presence of an associated thymus enlargement in these patients should be kept in mind. If present it may be the cause of sudden death in an otherwise vigorous child. Preliminary roentgenographic examination in order to determine the presence or absence of an enlarged thymus is good practice. If present, one exposure to the ray will reduce it to such size that the operation may be safely carried out.

TECHNIQUE OF REPAIR OF LIP.

The technique of repair of the lip is pretty well standardized. Relief of tension, broad approximation of the pared margins of the cleft, and the equalizing of the length of the two sides of the lip are essentials of prime importance. The relief of tension is accomplished by widely separating the lip segments from the underlying bone. Blanching of the tissues when the edges are approximated means that the sutures are tied too tightly or that tension has not been properly relieved. If necessary to obtain thorough relaxation, the soft parts may be separated from the underlying bone to a point well up on the cheeks. In this connection, Roberts believes that the inexperienced operator uses too much restraint in these operations, and further remarks that "the cheeks will furnish sufficient musculo-cutaneous material free from strain, if freely incised and liberated from the underlying bone." Having so mobilized the two sides of the lip, the cleft margins are pared, sufficient tissue being removed

from each side to obtain a broad approximation of raw surfaces when the sutures are tied. The two sides of the new lip should be equal in length, and should be a little longer than actually desired in order to anticipate the contraction which will occur at the vermilion border.

UNILATERAL CLEFT LIP AND ALVEOLUS.

At the primary lip operation in unilateral clefts, the sagging nostril on the cleft side, and the premaxilla may be considered. Often these deformities may be corrected at the time of the lip operation. The depressed nasal ala is

particularly when the operation is done while the child is quite young. The repaired lip thus exerts sufficient pressure to bring the soft bones of the arch into proper alignment and facilitates good union of the two sides of the cleft. However, after well planned and carefully performed operations, a child may reach eight or ten years with a sagging nostril on the cleft side and a flattened, misshapen nose. To lessen the possibility of this, it is desirable to pay attention to the distorted nose and to the premaxilla at the first operation, if it is safe to do so.



No. I.—Patient, age 12 years, with Unilateral Cleft of Lip and Alveolus. Notice all features discussed in text, in regard to sagging, flaring nostril on cleft side and projecting Premaxilla, resulting in quite an ugly deformity.

cut loose from the underlying maxilla on the cleft side and a cut may be made into the alveolar process and maxilla of the sound side, between the pulps of the canine and lateral incisor teeth. This may be done without materially increasing the severity of the operation. Pressure will then cause a "greenstick" fracture and the premaxilla is thus more easily held in proper alignment. In suitable instances, it may even be further held by a wire suture passed through the soft bones at the margins of the cleft. At other times, merely correction of the sagging nostril and repair of the lip over the cleft in the alveolar arch or the projecting premaxilla accomplishes just as much,



No. II.—Same as No. I, after Repair of Lip and Alveolus.

BILATERAL CLEFT LIP AND ALVEOLUS.

In patients with bilateral clefts of the lip and alveolar arch, the problems and methods of attack are largely the same, namely; complete relaxation by wide separation of the soft parts from the underlying bone, broad approximation of the pared cleft margins, and correction of the flaring alae of the nose. The premaxilla in many of the cases projects forward at a right angle to the rest of the face and produces a particularly hideous deformity. Years ago surgeons were in the habit of cutting this entirely away, and then repairing the lip over the space. This produced a very unsightly lip and should be condemned. At the present time removing a wedge-shaped section from the vomer, or simply fracturing the vomer, will per-

mit the premaxilla to be forced down into alignment. Still again, just as in unilateral clefts, it may be possible to unite the lip over the premaxilla, and the lip pressure will accomplish the desired end. In my experience the latter procedure has been sufficient to bring

months after the primary operation, if the patient is in suitable condition, since in every instance, the sooner the repair is made the greater is the likelihood of obtaining ultimate good results. Many surgeons in this country believe the ninth month, or before the child has



No. III—Male, age 2 months, with Unilateral Cleft Lip and Alveolus and a Bilateral Cleft in the Palate. Notice sagging nostril in Cleft side, and the prominent projecting Premaxilla. To date the Lip, Alveolus, and all of the Hard Palate has been repaired. The child is now 9 months of age. At 18 months to 2 years the soft palate will be closed.

the premaxilla into position. It is not absolutely necessary in these cases to get a perfect cosmetic effect on the lip at the first operation. The chief point is to get an early union of the component parts of the lip so as to receive full benefit from the effects of pressure and normal development. Secondary operations on the lip may be easily done at later dates in order to improve the cosmetic effect.

REPAIR OF HARD PALATE.

The next step in the sequence of the operations is the repair of the hard palate. Surgeons vary somewhat in opinion as to what is the most suitable age for doing this. Berry suggests waiting for two years after the primary lip operation and since his experience is so broad, and his observations so convincing, one cannot err in placing a great deal of faith in his opinion. Brown advocates operation as soon as the child will endure it. To Dowd it seems desirable to repair the palate within a few



No. IV—Same patient as in picture No. III. Repair of Lip, Alveolus and Hard Palate has been completed. The sagging nostril, and projecting Premaxilla have been eliminated. There remains besides the soft palate, a slight notch in the lip, which can be easily corrected.

learned to talk is the time most suitable for the operation. Preparing the patient, and operating only when the physical condition is sound, applies here even



No. V—Patient, age 6 years. Illustrates the Repair of an Unilateral Cleft of Lip. The Sagging Nostril on the cleft side has been corrected and the Vermilion Border is straight. The stitches are still in place as the picture was made 3 days after operation.

more forcibly than in the lip operations.

The actual technique of the repair of the hard palate is not difficult; the ultimate outcome is another matter. Through lateral incisions close to the alveolar arch muco-periosteal flaps are elevated. These flaps are pared at the margins of the cleft, and the raw edges sutured. At times it may be desirable to close the hard palate in two stages, first the anterior half and later the posterior, particularly so when the cleft is quite wide or bilateral. Here the relief of tension on the suture line is paramount. Nothing but failure follows unrelieved tension. The evolution of cleft palate surgery, and the many present day modifications of the old von Langebeck operation are simply indications of continual search for some method of relieving this tension. Brophy narrows the cleft by first wiring the opposing maxillae and drawing these together by tightening the wires over plates. Lane advocates turning over one flap hinge-like, leaving it attached only at the cleft margin and suturing it beneath the flap of the opposite side. G. B. New makes use of what he calls the "delayed pedicle flap," raising the flaps and waiting an interval of several days to increase the blood supply before suturing in the midline. Dowd makes use of aluminum plates and silver wires to support the flaps and keeps gauze packing between the elevated flaps and the underlying bone, so as to prevent prompt reunion of the flaps to the bone and consequent strain on the suture line. Personally I have had most success with the use of packing placed behind the flaps. This increases the size and thickness of the flaps, increases blood supply, and prevents reunion with the bone. It is astonishing with how little infection and contamination this can be accomplished. In difficult cases I have left this packing in place as long as eleven days. On the other hand, Blair states that packing is objectionable because it becomes foul and may cause pressure necrosis. I have had no experience with aluminum plates as used by Dowd, nor the Brophy or

Lane operations. There is therefore apparently as yet no unanimity of opinion as just what is the best plan for relieving tension in operation on the hard palate.



No. VI.—Male, age 6 weeks, with Bilateral Cleft Lip and Palate, just before the primary lip operation. To date the lip and one-half of the palate have been repaired. This child is now 18 months old. The final operation will be done soon.

Preservation of the blood supply of the flaps is assisted by avoiding injury to the posterior palatine artery. Lateral incision are therefore so placed as to prevent injury to this vessel, and ought to be directed, as suggested by Blakeway, outward against the alveolus and as far laterally as possible. Freeing of the attachment of the aponeurosis of the palate to the margin of the bone at the junction of the hard and soft palates is always necessary to relax the flaps and allow them to fall towards the midline.

REPAIR OF SOFT PALATE.

The final step is the repair of the soft palate and is best done at the age of one to two years. Brophy believes that the operation of the soft palate before the age of sixteen months "invites failure." The technique is much the same as in the correction of the hard palate. The soft palate is very important, and very delicate. Care should be exercised to avoid a loss in its depth and to prevent it from reaching the posterior pharyngeal wall. It is desirable therefore that no secondary operation should be necessary for the soft palate.

It is atrophic at best, and each secondary operation means the removal or injury of valuable tissue.

819 Professional Building,
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REFERENCES:

Davis, John Staige: *Annals of Surgery*, Vol. lxxx, p. 363, September, 1924.

Mathews, Frank S.: *Annals of Surgery*, May, 1912, p. 771, Vol. lv.

Berry, James: *Surg. Gyn. and Obs.*, January 15, p. 86, Vol. xx. Also *Brit. Med. Jour.*, October 28, 1911.

Thompson, James E.: *Annals of Surgery*, October 21, p. 394, Vol. lxxiv.

Brown, George V. I.: *Surg., Gyn. and Obst.*, January 15, p. 87, Vol. xx.

Lane, W. Arbuthnot: *Cleft Palate and Hare Lip*. London, 1908.

Sherman, H. M.: *J. A. M. A.*, Dec. 18, 1917, p. 1966. Vol. lxix.

Berry and Legg: *Hare Lip and Cleft Palate*, London, 1912.

Berry, James: *Surg. Gyn. and Obst.*, Vol. xx., p. 85, January, 1915.

Ritchie, Harry P.: *Archives of Surgery* July, 1921, p. 230, Vol. iii.

Brophy, Truman W.: *Cleft Lip and Palate*. Philadelphia, 1923.

Blair, Vilroy P.: *Surgery and Diseases of the Mouth and Jaws*. St. Louis, 1912.

Roberts: *Treatment of Complicated Cleft Palate*. *Penn. Med. Jour.* 24:64, Nov., 1920.

Shearer: *Cleft Palate and Hare Lip*, *Minn. Med.* 4:293, May, 1921.

Brophy: *Cleft Palate and Hare Lip Procedures*, *Minn. Med.* 4:283, May, 1921.

Berry: *Operation for Cleft Palate*, *British Jour. Surg.* 8:364, Jan., 1921.

Ritchie: *Repair of Hare Lip and Cleft Palate Deformity*, *Minn. Med.* 4:15, Jan., 1921.

Thompson: *Simplification of Technique in Operation for Hare Lip and Cleft Palate*, *Annals of Surgery*, 74:394, October, 1921.

THE PARATHYROID HORMONE AND TETANY*

SPENCER P. BASS, M.D., Tarboro, N. C.

The parathyroid glands are small brownish red bodies about the size of a small lymph gland which they closely resemble. There are two pairs, the superior and inferior. They lie against and are sometimes imbedded in the internal portion or external surface of the thyroid gland, just outside its intrinsic capsule. Aside from this, they have no very constant position and may be either high or low, internal or external, separated, or more or less grouped. But usually they have a fairly close relationship to the four principal thyroid arteries. Their blood supply may be interfered with by the ligation or injury of these vessels. There is little if any direct vascular connection between the parathyroids and the connective tissue surrounding.

An abnormal arrangement of the parathyroids may be found, and accessory glands may be present and located over a wide area.

Removal of all parathyroid tissue even with the preservation of normal thyroid tissue leads to a train of symptoms known as tetany and to speedy death; while no tetany results from the removal of the thyroid if one para-

thyroid remains and is capable of functioning. After parathyroidectomy symptoms of tetany usually reach their height within the first twenty-four hours, and if death does not follow, in untreated cases, life is said to depend upon hypertrophy of remaining parathyroid tissue. In some cases which survive, tetany becomes chronic.

That there is a parathyroid hormone has been recently demonstrated by Dr. J. B. Collip of the University of Alberta, Canada. He has shown that by weak acid hydrolysis of the fresh parathyroid glands of the ox, an extract can be obtained which contains an active principle or hormone, and that the use of this substance in parathyroidectomized animals completely replaces their natural hormone and prevents tetany or cures tetany already present in such animals by restoring the blood calcium to normal. This substance has been produced in a fairly pure and stable form. It seems to be of the nature of a complex protein derivative or is intimately associated with such a compound.

The administration of this substance to parathyroidectomized animals quickly raises the blood calcium to normal or above. Its use in normal animals results also in increased blood calcium and smaller doses are required to produce

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this calcium rise in normal, than in parathyroidectomized, animals.

A unit of the hormone is defined by Dr. Collip as 1/100 of the amount of extract which will produce an average increase of 5 mg. in blood serum calcium of normal dogs of approximately 20 kilos weight over a period of 15 hours.

The dose of this substance is rather elastic and may vary from 10 to 100 units. Of great practical importance is the fact that even massive single doses in normal animals have no untoward effect; but when the hormone is given over several days in quantity sufficient to produce and maintain hypocalcemia, over-dosage phenomena appear, the first symptoms of which are vomiting, headache and prostration. If the dosage is continued death ensues. No antidote is known, but life may be prolonged by glucose and "soda intravenously. In practice we need have little fear of over-dosage; for, in addition to estimating the blood serum calcium, the clinical symptoms, vomiting and prostration give ample warning. Recovery is the rule when the extract is discontinued. It is obvious that this hormone gives us the means of relieving the unfortunate who has lost his parathyroids just as insulin gives us the means of making the diabetic comfortable. It also gives us the means of relieving tetany occurring in other than the parathyroidectomized.

Several types of tetany have been described, in all of which, with one exception to be noted later, there is a hypo-function of the parathyroids, which results in lowered blood calcium. The acid-base equilibrium of the blood is disturbed and a condition of alkalosis exists, which the body attempts to neutralize by the acid products of muscular exertion.

An increased carbon dioxide combining power of the blood is probably responsible for the alkalosis. Ganglia and nerve ends are hypersensitive and all stimuli are magnified.

Normal values in blood serum calcium range from 8.5 mg. per 100 c.c. of blood serum to 10.8 mg. An average normal of 10 mg. has been accepted. In

tetany the blood serum calcium is usually below 7 mg. The hormone may produce hypercalcemia of 20 mg., or more.

Guanidine, a substance found in the blood in certain conditions, and derived in the process of protein metabolism, will produce tetany. Dr. Collip has produced tetany by the administration of guanidine and attempted to relieve it with his hormone. He gave the hormone to the point of over-dosage without affecting this type of tetany.

We do not know the cause of parathyroid hypo-function in many types of tetany. Tetany is a symptom, a result and the term idiopathic tetany is still applicable.

Dr. Collip himself, says that the clinical use of his hormone is still in the early experimental stage and, therefore, I will not discuss its use in conditions other than in tetany.

A negress of fifty was assisted into my office. Her hands and feet were held in the characteristic position of tetany, carpo-pedal spasm. She was in pain and constantly rubbed her forearms and legs with her spastic hands. Her face was distorted. There was difficulty in swallowing and in speech, due to spasm of pharyngeal and laryngeal muscles. She had had her thyroid removed five years before. The symptoms of tetany began in about ten days after the operation and had become chronic. At times she was almost free from spasm, but could not work. There was the usual scar of operation and a round movable mass the size of a golf ball lying against her larynx. One vocal cord was paralyzed. Whether the mass just mentioned was thyroid which remained or some other structure, I do not know. The late outset of tetany would indicate that all parathyroids were not removed at operation, but so damaged that they soon failed to function sufficiently. Calcium chloride did not relieve her, but she seemed to benefit by taking parathyroid substance. This may have been true, for Collip's hormone is effective when given by mouth. The new hormone in from 10 to 25 units daily will give relief to such a case. Transplantation of a human par-

athyroid has been done. Absorption of the hormone which it contains has tided the patient over a critical period. It is doubtful if the gland has continued to function.

A woman of twenty-five, white nursing her year-old baby (her third), was suddenly seized with carpo-pedal spasm and spasm of respiratory muscles. She had not been feeling well for several days. The pain in arms and legs was excruciating, requiring the service of several neighbors as rubbers and finally morphine to relieve. The attack, which was the only one, lasted several hours. Something, probably the prolonged lactation, upset parathyroid secretion; the blood calcium was lowered and tetany followed.

Any muscle or group of muscles may be involved. The cramps and pains of pregnant and lactating women are often of this nature. The call for calcium is great in these conditions and the blood calcium may be lowered. In parathyroidectomized animals the pregnant state increases the manifestations of tetany. We may see frank tetany with classical symptoms during pregnancy and lactation; but more often tetany is latent and manifested by cramps of small groups of muscles or of single muscles. The administration of calcium and balanced diet relieves these cases.

A man of fifty was seen in the late hours of the night. He had the usual rubbers in attendance. His hands and feet were in the classical position of tetany. He was in great pain and had some difficulty in breathing. His face was distorted. He stated that he had had attacks of cramps for many years and that an attack was always preceded by a gastro-intestinal upset. The cramps of the aged, the debilitated and poorly nourished can often be relieved by measures which restore the acid-base equilibrium of the blood.

A woman of thirty was seldom free from carpo-pedal spasm. Her stomach was dilated due to partial obstruction and spasm of the pylorus, and she frequently vomited large quantities of food. Neither calcium nor the hormone

relieved her. So small a dose as 10 units of the hormone would cause intense headache and vomiting. This case was probably due to the presence of toxic material in the blood, probably guanidine. Tetany was certainly not due to hypocalcemia.

True so-called gastric tetany is that due to loss of hydrochloric acid from persistent vomiting in acute obstruction at or near the pylorus. These cases can be prepared for operation by the administration intravenously of calcium or ammonium chloride. The effect is quickly seen in the relaxation of affected muscles. I have not seen a report of the use of the hormone in this type of tetany.

A male child eighteen months old had frequent convulsions during several months. An over-loaded stomach, or the onset of an infection, would precipitate an attack, and one convulsive seizure would follow another. Carpo-pedal spasm was always present during and after the convulsion had ceased. Spasmodophilia or infantile tetany is responsible for many of the spasms of infancy and childhood. Such spasms are easily recognized if the characteristic carpo-pedal contraction is present; but as it is not always in evidence, one must keep in mind cerebral diseases or injury, epilepsy, enlargement of the thymus, convulsions of toxic origin and many other conditions. The most severe tetany is seen in rachitic children who are vomiting from some toxic cause. These children often present a picture of general tonic spasm most intractable.

Attention has recently been called to the association of tetany and the convulsions occurring during whooping cough. It is probable that tetany is the real cause of these convulsions, which are excited by the fever and toxemia of the disease.

Carpo-pedal spasm may last but a short time or be present for days. The child may be able to use his hands to grasp an object, but upon releasing it the hand quickly assumes the spastic position. There may or may not be pain.

Infantile tetany is always accom-

panied by rickets. The rachitic condition in some unknown way causes the parathyroids to underfunction. The breast-fed may be affected just as the breast-fed may have rickets, but it is usually seen in the bottle-fed. Children fed on lactic milk seldom have tetany. This is probably due to the sparing of hydrochloric acid in the stomach and to better digestion and absorption of calcium salts, which are not so apt to form soap with the fats.

Tetany accompanying the diarrheas of infancy indicates a bad prognosis. The loss of calcium by bowel is greater than the intake.

General convulsions are only one of the manifestations of tetany in infants. Tetany may be latent, or, as in other forms, affect any muscle or group of muscles. When tetany is suspected the following tests may be made:

Chvostek's sign consist in the momentary contraction of the muscles of the face when a branch of the facial nerve is stimulated by a light blow over it. It may be tapped with finger or pencil about the middle of the cheek or near the outer canthus. The muscles supplied by the nerve branch stimulated will contract. This sign is present in 80 per cent of the cases. Trousseau's sign is elicited by pressure of a bandage or hand upon the upper arm or leg. The pressure must be firm enough to temporarily stop the circulation. The hand or foot will assume the position of spasm. It is present in only fifteen per cent of cases; its application is painful and it should not be used. In a hypersensitive patient it may excite a convulsion. Erb's sign, which is the quantitative reaction of the nerves to the galvanic current, is always present. The disadvantages of its general application are obvious.

Laryngo spasms or laryngismus stridulus is a manifestation of tetany. An analysis of 50 cases of tetany recently published states that sixty-five per cent of these had laryngo spasm, thirty-four per cent carpo-pedal spasm, and fifty-two per cent general convulsions. In laryngo spasm the spasmodic closure of the glottis and spasm of intrinsic laryn-

geal muscles may cause fatal asphyxia. Breath holding, when not due to temper, is due to this cause, and deaths from so-called breath holding are in reality deaths due to laryngo spasm.

In the treatment of general convulsions due to tetany, the hormone may be employed in doses of from 10 to 30 units and repeated as indicated. After employing the time-honored hot bath and emptying the bowel, chloroform, which controls the seizures with certainty, may be used while other and more lasting measures are being employed. Children with convulsions have increased tolerance for opium. Morphine, which is convenient and usually ready, should be given. At six months gr. 1/40, one year gr. 1/20, and at two years 1/16 of a grain. The dose may be repeated within one hour, or the initial dose doubled in severe cases.

Magnesium sulphate may be given in solution subcutaneously, and the dose is 1½ grains of the anhydrous crystals for each pound of body weight. The effect appears more slowly than that of morphine, but is more prolonged. Magnesium sulphate and morphine may be given simultaneously, and, because of the synergism existing between these two drugs, a profound relaxation may be obtained with from one-half to one-eighth the amount of morphine required where morphine is given alone. Chloral may be given by rectum at the rate of 4 grains to a 15 pound child.

Calcium chloride, which is more effective than the lactate should be given by mouth as soon as possible. It can be given intravenously in one to two per cent solution up to 50 grains. Use of the hormone will probably make this unnecessary. Hydrochloric acid may be given by mouth and appears to have, when given with milk feeding, the same effect as the administration of calcium chloride.

The giving of sodium bicarbonate intravenously for the relief of acidosis may cause tetany by the alkalosis which it produces, and where such therapy is contemplated a hyopodermic of magnesium sulphate solution should be given a half-hour before.

The present conception of rickets, the underlying cause of infantile tetany, is that it is a failure of the body to properly utilize calcium and phosphorus. It is now recognized that certain short rays of the ultra-violet zone of the solar spectrum will prevent or cure active rickets. This property is also inherent in less degree, in certain fats and other substances of which cod-liver oil is an out-standing example. Ultra-violet light acts upon tetany just as it does upon rickets. After a few exposures to the mercury quartz light for from five to twenty minutes the amount of calcium in the blood rises to normal. But it can not be made to exceed normal by this means. Even before normal in blood calcium is reached all clinical signs of tetany have disappeared. Clinical tet-

any is quickly cured by ultra-violet light, while clinical rickets disappears more gradually; which is to be expected since soft bone requires some time to calcify. The blood calcium remains normal after exposure to the rays is discontinued. Once it begins to rise it continues until normal is reached.

Collip's hormone will prove of great value in controlling the convulsive seizures of infantile tetany. We have added to our old methods this hormone for the relief of symptoms and this new knowledge of the rays of the sun for its cure.

More important still is the knowledge that by exposure to these beneficent rays, by the administration of cod-liver oil and proper feeding, we may keep our babies well.

THE STATUS OF THE PULPLESS TOOTH

H. O. LINEBERGER, D.D.S., Raleigh

The pulpless tooth has possibly had more written about it during the last decade than any one disease-producer of the human body. Not merely the tooth itself, but contributions made by it as a causative factor in creating a focus of infection.

According to history and the past experiences of the medical and dental professions, many new discoveries or modes of treatment come first from some over-enthusiastic leader or co-operative group. Many of the radical treatments in medicine and surgery have proven to be mere fads of short duration and have passed into disuse, others have proven their worth and remain as accepted rational practice.

The pulpless tooth and its various ramifications has had an experience not unlike the others, save in one particular, and in this it has exceeded all others. It is usually the surgeon who has the final say as to when to remove a gall bladder, a kidney or do an operation for appendicitis. To the throat specialist has been left the decision when best to do a tonsillectomy and so on. But the suspected tooth has been ruthlessly extracted by everybody from the first year college student up to those practicing

major surgery. This practice of seriously injuring the organ of mastication has often been done in the hope of relieving some remote trouble.

During the last three months there have been two debates held in the city of Chicago, on the subject, "Resolved, That Practically All Infected Pulpless Teeth Should be Removed." Master minds clashed over this one point. Men who have had many years of experience and equally as many years of research and laboratory work, report findings and experiences of widely different natures.

Weston A. Price, D.D.S., M.S., F.A.C.D., Cleveland, Ohio, a scientist who has given to the world probably more than any other, regarding focal infection, reiterated many of his nationally known findings. He set about to prove his statements by citing results on many cases treated, and literally thousands of tests on rabbits and guinea-pigs, and other laboratory procedures. He discussed at length calcium metabolism and ended his long discourse in a plea that we should eliminate all possible foci of infection in the form of devitalized teeth, thereby removing the cause of many of the human ailments.

John P. Buckley, PhG., D.D.S., F.A.C.D., past-President of the American Dental Association, Hollywood, California, in the debate, set about to prove that many of the findings of Dr. Price and others believing as he does are not sufficient proof on which to base their claims. He shows from clinical cases that root canals can be filled and that many so-called dead teeth are not disease producers, but on the other hand, are perfectly healthy. He discredited many of the now thought-to-be radiographic signs of infection. Dr. Buckley referred to the present experience of the dental profession as being similar to the practice of some of the world's foremost surgeons who became attracted to some special operation which later proved to be merely a fad. Some operations he chose to class as nothing short of criminal. The great scientist closed his discussion by saying, "But, thank God!; most men in our profession have a conscience and do stand in bewilderment. They are absolutely lost and know not what to do. To these, let me say that no man who yields to the dic-

tates of his conscience can go wrong, and he who applies the golden rule in his affairs will find conscience an ever-ready and ever-willing aid. God giving me strength, I will spend the remainder of my life, if need be, correcting this damnable and criminal practice for which you, sir, Dr. Price, whether you realize it or not, are in large measure responsible."

The few illustrations will suffice to show how hopelessly divided the dental profession stands to-day on the subject of the "pulpless tooth." With these facts in mind is it not of sufficient moment that we stop and think, lest we in haste do that which, if we are conscientious, we will regret to the end of life. Truth will, of course, win out, and out of the present confusion and serious study, is bound to come progress. If it be a fad, it will go. If the present practice weathers the test then it will surely be adopted as a rational procedure. With the light we have let us practice rationally.

"Procede sed semper sano animo."

A NEW-OLD DRUG OF IMPORTANCE*

T. GRIER MILLER, M.D., Associate in Medicine, University of Pennsylvania Medical School, Philadelphia

Ephedrin is the active principle of the Asiatic plant *ma huang* which has been used by the Chinese as a medicine for more than 5000 years. The alkaloid itself was first isolated by Nagai, a Japanese, in 1887; but its practical medicinal value was not appreciated until 1924 when Chen and Schmidt published a report of certain physiological and clinical experiments with it, showing conclusively that it had sympathomimetic actions similar to epinephrin. They pointed out, furthermore, that it had practical advantages over the latter drug in that it could be administered effectively by mouth, in that its effects were more prolonged and in that its solutions

were very stable.

Following the suggestions contained in Chen and Schmidt's article a more exhaustive study of its actions in hospital patients has confirmed certain of their conclusions, and has showed particularly that, when administered subcutaneously or orally, it usually will relieve attacks of bronchial asthma and, when locally applied, it will produce marked contraction of the nasal mucous membrane without subsequent irritation. It also has a blood-pressure raising effect and this persists for several hours, being at its maximum in a half to one hour and then gradually subsiding. This action has been more marked, it is true, in those individuals whose pressures approach normal than in those with pathologically low pressures, yet

*Abstract of paper on the "Use of Ephedrin in the Treatment of Vascular Hypotension and Bronchial Asthma" which was presented before the Mecklenburg County Medical Society on January 19, 1926.

in a limited number of hypotension cases it has produced not only temporary elevations of the pressure but also a sense of well-being and increased strength. Experimental work on animals suggests even that it may be of value in conditions of shock and hemorrhage and perhaps even more may be expected of it in those secondary hypotensions that result from infections and nervous and physical exhaustion. In a few of the latter its beneficent action has already been demonstrated.

The work so far accomplished at least

shows that it is a safe drug in doses of 50 to 100 mg., that it will have a useful place in the local treatment of congestive nasal conditions and in asthma, and justifies further experimentation in all cases associated with low blood pressure.

Unfortunately, ephedrin is not as yet generally available in this country and consequently some time may elapse before a widespread trial of it is possible. Meanwhile it is hoped that those securing it will make careful observations of its effects and report them.

REPORT OF CATARACT CASES PRESENTING FEATURES OF UNUSUAL INTEREST

J. G. JOHNSTON, M.D., Charlotte

Case No. 1. James Davis, col., age 38, laborer. 10-8-23. Father killed when young. Mother living and well. Father's mother had cataract. Wasserman reaction negative, urine normal. About ten years ago had a short severe attack of fever, probably malarial. Two years later begun to notice a dimness in both eyes. No history of any sore eyes. Light perception and projection good in both eyes. Tension normal, lens opaque in both eyes. Oct. 9th, 1923, did double iridectomy following keratome incision. Wound closed next day. pillars free and tension normal, but for ten days eyes staid slightly red, mostly in the ciliary region. No pain. After ten days in the hospital he was sent home for ciliary redness to subside before completing operation. From this time to Jan. 4th, 1924, when he returned for extraction, he had no pain. On 1-4-24, after usual preparation, the lens in the right eye was extracted. In making the incision the conjunctiva fell over the point of the knife at the nasal side making a rather large conjunctival flap. Upon removal of the cystotome, after doing a capsulotomy, the lens came out with the instrument. No loss of vitreous. Pupil was pretty thoroughly dilated and from the ciliary body was a whitish fringe extending up to where the edge of the lens had lain. Seemingly this was the suspensory ligament which had become diseased and had lost its life and elasticity. Uneventful recovery.

Jan. 14th, ten days after operation pillars were free, vitreous clear, fundus normal, conjunctiva still red, tension normal. Incision entirely healed and upon testing out his vision with a small lens his face lighted up and he said, "Gimme one of dem an lemme go home." With $+11.00 = +2.00$ C. axis $15 = 20/70$ vision.

Case No. 2, Miss J., 53, W. 7-18-24. Three years ago eyes began to fail. Seven months ago had her glasses changed. They were satisfactory for three or four months, then got so she could not see through them and could not recognize people at any distance. Vision, O. D. light perception, O. S. 4/200. O. D. lens opaque, iris, cornea, tension, and conjunctiva normal. Projection good and urine normal. Blood pressure 135. O. S. Normal except some opacity of the lens. Advised extraction of lens in right eye. Feb. 26, operation under cocaine anesthesia. Usual incision of almost one-half of the circumference of the cornea. Large iridectomy. Lens removed in its capsule, pillars replaced and dressing applied with mask and put to bed. Uneventful recovery. Patient staid quietly in bed for seven days and went home on the tenth day. March 10, wound was healed except a slight gaping of incision at upper edge. Slight opacity of anterior limiting membrane of vitreous and considerable opacity of the vitreous itself. April 4th. Eye healed, redness gone. Vision with

+7.00=+1.50 C. axis 165 is 20/70, or if eye was quiet for some time vision was 20/30. This glass was ordered and she was put on lipoiodine. July 9th, opacity of anterior limiting membrane has cleared up, but opacities of vitreous still present. Lipoiodine continued. April 25th, '25, O. D. in good condition, vitreous nearly clear of opacities, vision good and does light work regularly. Vision O. S. light perception, projection good, lens opaque, and has milky appearance. Tension, iris, cornea, and urine normal. Blood pressure 140. 4-30-25. Under cocaine and novocaine anesthesia incision including one-half of circumference of cornea was made. Iris fell over knife and wide iridectomy was done at same time as the incision. Fearing a fluid lens the intracapsular operation was done. Upper edge of lens would not present itself in the incision, but after some manipulation the lower edge was detached and presented itself in the wound and being followed by a hook under gentle pressure the lens was delivered without the loss of a single drop of vitreous. Pillars were freed and the wound closed. Usual dressing. (Elevator being out of order she was operated on in her own room, on her bed, and was not moved afterward. Best prospect ever for a good result.) During the night she was nauseated and vomited all over everything, but had no pain in her eye.

5-1-25. No pain, comfortable except feeling of nausea. Bandage was removed and eye inspected. Lids appeared normal, but on lifting the upper lid I found that the wound had gaped open, the edge of the lid had caught the corneal flap and it was folded back on itself, leaving about the upper third of the eye uncovered by cornea, there being nothing between that part of the iris and the lid. The lid was gently lifted and with a sterile instrument the folded part of the cornea was replaced. Of course I gave the eye up as lost, and you can imagine my feelings. Thinking the thing over I decided to bring down a conjunctival flap so as to hold the corneal flap in place. Dr. John Hill Tucker, who assisted with the operation, also saw her and we examined the

eye again before taking her to the operating room. To my surprise the corneal flap was in good position and good condition though showing the crease where it had been folded on itself, so we decided to postpone operation and watch developments. She was nauseated more or less for two or three days and a snugly fitting dressing with no pressure on the eye was kept on. From day to day the cornea improved in appearance and, to my great satisfaction, the edges of the wound healed as if nothing had ever happened. There was never the slightest sign of infection in the eye. She staid in bed a week and went home on the 13th day. The eye was refracted on June 29th and, with +10.00=+2.00 C. axis, 15 had 20/30 vision. She is today the happy possessor of two good eyes, and I have learned that in a clean eye the anterior chamber can be wide open for several hours and still no bad results come from it. Sept. 8th, she came in the office with the left eye slightly red, cornea had lost part of its lustre and not feeling comfortable. Said that a few days before she had received a severe blow on the left side of her forehead. She was given a mild wash and the next day phoned that she was suffering intensely. On seeing her found the eye (left) red, cornea steamy and tension up +2 to touch. Was put on pilocarpine 2 per cent every two hours with hot applications and the next day she was comfortable. I saw her occasionally and she was in very good condition until Dec. 9th, at which time she came in feeling well but on examination of the eye found the tension up, tonometer 75, the disk cupped distinctly and the field contracted, especially nasally. She was having no pain at this time. She was advised to have the eye operated on to prevent another attack. She agreed to go to the hospital the next morning. That evening at 7:30 a telephone call came saying that she was suffering a severe attack of pain in her eye. Pilocarpine was increased, aspirin was given and she was urged to be at the hospital next morning. On reaching the hospital it was discovered that she had a purulent conjunctivitis to com-

plicate her other troubles. This of course, prevented the operation and she was kept in the hospital four days under treatment. At this time it was deemed wise to proceed, as no bacteria were found in the smear from the eye. On Dec. 14th, a trephining operation was done, half the opening being in the cornea and half in the sclera with a large conjunctival flap. There was almost no reaction following the operation; her pilocapine was stopped and she has had no pain since.

Jan. 4th, 1926. Eye in good condition no pain, no medicine since operation. Vision improving and field enlarging. She is feeling well, does her housework and wants to go back to her work.

Case No. 3. Feb. 1st, 1818. Geo. C., col., 47, farmer. His eyes have been giving him trouble since 1903, at which time he was struck in the right eye. Sight began to fail in that eye at once. Drank a good deal when a young man. O. D. iris tremulous, lens opaque and dislocated, lying just back of the iris below. Numerous patches of old choroiditis all over fundus. Tension normal; vision light perception. O. S. has more recent choroiditis near nerve head and numerous patches of old all over fundus. Nerve head indistinct, vision 20/70. Advised operation to remove dislocated lens, but as this was not accepted, advised subconjunctival injection of cyanide of mercury in both eyes. This was done on Feb. 9th, under cocaine anesthesia. Considerable reaction from the injection which cleared up in the usual time.

The left eye gave him no more trouble and on May 7th +0.75 was given him to wear on each eye, bringing the left up to 20/40, but no improvement in right. I saw him no more until March 2nd, '25, when he came in saying that two months before his left eye had begun to fail and had failed rapidly since that time. Vision; could count fingers at two feet; lens was opaque and, while in its proper place, is apparently dislocated as this iris is tremulous. Small opaque spot almost in the center of the cornea. Tension normal; pupil does not respond to light;

small red crescent in pupil above the opaque lens. Wasserman negative. O. D. has questionable light perception; 4 or 5 small white spots on posterior surface of the cornea and lower angle of the anterior chamber has a considerable pile of this kind of debris in it. Fringe of the same kind of material borders the pupillary edge. Tension normal. By leaning the head forward strongly and holding it in that position for some time the remnants of the lens will roll down over the pupil. On lifting the head the lens rolls back and disappears from sight. It appears to be about one-third the size of the normal lens and seems to be the nucleus of the old dislocated lens. Advised operation for removal of opaque dislocated lens of left eye, and on March 7th this was undertaken. Eye was prepared in the usual way and cocaineized. Usual incision. As soon as the incision was completed the lens shot out followed by a gush of vitreous. Speculum was exchanged for a lid elevator. Iris protruded and was cut off as was the protruding vitreous. Cornea collapsed (depressed in centre). The advisability of injecting normal saline into the eye to lift the depressed cornea was discussed, but we decided to see what nature would do to restore it to its normal position. Dressing applied with as near no pressure on eye as possible. The eye was inspected the next day and the cornea was found to be rounded out normally. There was very little reaction following the operation and patient was able to leave the hospital in a week. Vision not very much improved. April 21st, eye healed nicely. Can see and distinguish small pictures with +10.00—+2.00 C. axis 165. Considerable floating opacities of the vitreous. Eye got along nicely and he was getting out around the farm and doing chores until June 12th when it began to pain again. I saw him on June 15th and found the cornea hazy with a small hypopyon in the anterior chamber. Tension normal. Atropine in the eye and hot boric acid applications were ordered and two days later the eye had cleared up and hypopyon gone. Since that time he has had no trouble so far

as I know and I hope he will retain what vision he has.

Case No. 4. Mrs. C. L. R., White, 32. Came in Jan. 25th, 1925, (Sunday afternoon) with the following history: Five years ago had some infection in right eye from which it was lost and had to be enucleated. Her husband claims that the doctor gave her medicine that caused her to lose her eye. Had 606 six times although Wassermann was reported negative. Last August (1924) was in an auto accident and had her face cut badly. Dec. 18th, 1924, her left eye had a skim (as she expressed it) to come over it, so she could hardly see. Good deal of pain in the eye at that time. Got all right in a few days. Jan. 11th, 1925, left eye again pained, vision was very dim and she had an attack of unconsciousness lasting 7 or 8 hours. Had four of these attacks in all and each attack was accompanied by pain in the eye and dim vision. Today, Jan. 25th, had pain and dim vision but was not unconscious. Vision, questionable light perception. Examination showed eye slightly red, pupil dilated, cornea slightly hazy with small opaque spot in the centre. Eyeball hard, tension +3 or 4 and, measured by the tonometer, was 80. Lens clear but could get no view of the fundus. Oblique illumination shows dislocation of the lens with the temporal edge in the anterior chamber, the sharply defined edge pressing right up in the angle. Nasal edge back under the iris. The lens was then in the pupil with the sphincter of the iris causing an hour-glass contraction of the lens as it lay in the eye. Wassermann negative. Urine normal. Immediate operation was advised but she said she was compelled to go home that night and would come next day for operation. She came back next morning with the eye redder than yesterday, saying that she had suffered all night. Two hypos and two tablets of some kind had failed to give her relief. No change in position of the lens or tension of the eye. Had vomited several times. Feeling generally worse. She was sent to the hospital and prepared for operation immediately. Butyn failed to anesthetize suf-

ficiently, and as we wanted a quiet patient, ether was given. A large cataract incision was made with a narrow knife. No speculum was used, but a lid retractor, so the pressure of the lids could be controlled as much as possible. On completion of the incision a bead of vitreous presented in the wound, the lens still lying in the pupil half in the anterior chamber and half back of the iris. Slight pressure on the lower part of the eyeball, at the same time making slight downward pressure on the upper lip of the wound, presented the lens in the incision when it was gently lifted out. Small amount of vitreous in wound. No incarceration of iris. Lower nasal part of iris was pressed forward where the edge of the lens had been wedged. Eye gently closed and dressing applied. This was Jan. 26th, and from then on the record reads: Jan. 27, had a good night. No pain in eye. Did not sleep well, but had not vomited. Eye not opened. Jan. 28. Eye quiet, no pain, cornea clear. Slight gaping of wound and iris forced in to make the pupil oval. Iris has regained its tone. Can see the form of a person. Jan. 29. No pain since operation. Cornea clear, and vision more distinct. Jan. 31. Eye left open for twenty minutes, looking fine. Still small vitreous escape. Feb. 1. Went home in fine shape. Redness practically gone. No pain and can see hand in front of face. Tension normal and anterior chamber reformed. Feb. 8. Tension normal, no pain since going home. Eye almost clear except at upper part where we have some redness along the line of incision. Base of iris pushed up in wound with edge free, but giving an irregular appearance to the pupil, it being square across the upper border. Feels fine and is in splendid spirits. Has had no pain or semblance of unconsciousness since the operation. Was sent home to live easily with only general use of eye. May 25. Eye still in good condition. No redness or tenderness. Tension normal +13.50 = +2.00, C. axis 30 gave her 20/40 vision. Dec. 31. Still in good shape, doing her work regularly and is very grateful.

Case No. 5. W. M. M. 75. Came in

May 24th, 1919, with the history of being unable to get satisfactory glasses for the last three years. Examination showed O. D. butterfly shaped opacity of posterior capsule along with some opacity of the lens nucleus. O. S. lens clear except a slight opacity of the nucleus. Vision in both eyes 20/30—and could not be improved. Advised injection of cyanide of mercury in both eyes. Aug. 26 both eyes were injected subconjunctivally using 25 minims of a 1 to 25000 solution. There was considerable reaction, lids and conjunctiva being edematous for three days and then gradually clearing up. Sept. 1, O. D. clearing nicely; O. S. still very red. Fairly good view of fundus in both eyes. Oct. 24, refraction as follows: O. D. + 1.00 gives 20/30 vision and O. S. + 1.50 gives 20/20 vision and +4.00 added to each gave good reading vision. Sept. 1, 1920. Eyes remain the same. Opacity of lens while it has not cleared up entirely has not progressed. Dec. 20, 1920, right lens considerably opaque especially at lower and outer edge. Right vision could not be improved so glass was not changed. Left was changed to +1.75 giving 20/20 vision and +4.50 for reading. During 1923 right eye gradually got darker and darker as the opacity increased and he had a great deal of facial neuralgia for which the infra-orbital and infra-dental nerves were injected with alcohol several times. Application of cocaine to Meckel's ganglion would give temporary relief. He was advised not to have the right eye operated on at present as he had one good eye, but that if the left began to fail to have the right operated on. He came in occasionally until April, 1924, when the right eye was completely blind and marked opacity in the left lens. He was eighty years old but his eyes were in apparently the pink of condition for operation,—cornea clear with the sheen of youth on them. Iris, tension and pupil normal. Light perception and projection good. Urine normal. Blood pressure 160. He entered the hospital April 16, for preliminary iridectomy, which was done the next day and all looked well. Next day the

redness had almost gone, but on the third and fourth days there was a slight ciliary injection especially along the line of incision. As this seemed disinclined to clear up he was advised to wait a week or two for this to take place. He did this and on May 8th the lens was removed from the right eye in its capsule with no loss of vitreous. There was very little reaction and the eye healed nicely. Left the hospital on the tenth day with the anterior chamber reformed, pillars free, cornea and tension normal. Soon after leaving the hospital he went to S. C. to visit his children and was away for several months during which time he had several attacks of neuralgia but his eye was in fine condition. Jan. 14th, 1925, the eye was refracted and +10.00 = +1.00 C. axis 60 gave his 20/20 vision and +4.00 added to that enabled him to read small print comfortably. Query? Did the cyanide injection have anything to do with his eye being in such fine condition for operation?

Case No. 6. Jan. 15th, 1925. Miss N. W., 55, says sight in right eye has been gradually getting worse for two or three years. Last two or three months can hardly see out of it at all. Father had cataract. Cornea and pupil normal and iris apparently so. Lens opaque and could get no view of fundus. Projection good. Blood pressure 110. Urine negative. Under cocaine anesthesia a preliminary iridectomy was done. Usual keratome incision and small section of iris removed. Iris seemed to be leathery, had no elasticity. Pillars replaced and eye banded. Two days later incision had closed, pillars free, anterior chamber had reformed and only slight redness of conjunctiva. Eye cleared up beautifully and on Feb. 10th, under cocaine anesthesia the lens was removed from the right eye. Lids were injected with one-half of one per cent novocaine. Usual incision. Slight pressure below the lens caused it to bulge up into the incision, but it would not protrude. Pillars of the iris did not stretch at all and fearing to use more pressure on the eye a needle was inserted in the lens and it was lifted out.

For some reason, probably from the needle penetrating the iris, when the lens came out the entire iris came with it, and some vitreous, but not a great deal. The whole anterior chamber filled with blood at once. Edges of wound coapted and the eye was closed and dressed. Had considerable pain the first 24 hours following the operation but it gradually passed away. Two days later wound was closed nicely. No swelling of lids. Anterior chamber reformed and almost full of blood. Feb. 14th—4th day—said she could see the light of the window. Feb. 16th. Eye only slightly red. Blood in anterior chamber absorbing, being now only in the lower half. She went along this way with very slow absorption of the blood until March 3rd when she was given a milk injection. This was repeated on March 10th and March 16th. From that time the absorption of blood was rapid. There was a membranous formation covering the whole anterior surface of the vitreous, much thicker at the upper edge and very thin at lower and nasal edges. This has gradually thinned out or been absorbed until you can get a very good view of the fundus through it and there are only two fine strands separating the two thin spots. Sept. 2nd, $+7.00 = +2.00$ C. axis 165 gave her 20/40 vision. The left eye still being in fairly good condition she was advised to wait for further absorption before having further operative work done. Dec. 12th, under concaine anesthesia the strip of membrane separating the two thin spots was cut through with a knife needle and a drop of atropine put in to keep the eye quiet. The cut edges have gradually separated, and Jan. 5th a good view of the fundus was had. She will be refracted in a few weeks unless there is reason to look for further improvement in vision.

Billy D., age 8 mos. March 28, 1925.

When five weeks old his mother noticed something wrong with his eyes. Said he could not see well. Examination showed both pupils white with the opacity apparently in anterior capsule of the lens, cornea and iris. Two days later, under ether the anterior capsule of each lens was opened with one cut of the knife. There was very little stirring up of lens matter. Atropine was instilled and eyes bandaged. There was so little reaction that I feared I had done no good and he was allowed to leave the hospital the next day. From that time there was never the least sign of irritation, the eyes never got red and the lenses gradually absorbed with no further needling. That to me is the thing of interest in this case, at the present time. It requires very close observation to tell that there ever was an opaque lens in either eye. Only in the upper edge of the left pupil can a small trace of opaque lens be seen. I know that a great many oppose the idea of early operation and some the idea of operation on both eyes at the same time, but no less an authority than Fuchs says that "Cataracts which are congenital or which develop in childhood should be operated on as early as possible. Children can be subjected to the operation of discission with good results at the age of a few weeks. If the cataract is not operated upon the development of the retina is arrested and amblyopia ex anopsia is produced. Consequently, the good result of a cataract operation that is performed at a later date is comparatively small so far as vision is concerned."

Dec. 26th. Eyes in fine shape, very little nystagmus has developed. He plays with toys like other children, and it takes rather close inspection to tell that he had either ever had cataract or was operated on.

616 Professional Building

A DISCUSSION OF POST-OPERATIVE URTICARIA*

W. J. B. ORR, M.D., Smithfield, N. C.

In order to outline this subject to you clearly, it will be necessary to take it up from both a medical and surgical standpoint, but I wish to lay special emphasis on urticaria as a surgical entity of post-operative origin.

It is recalled that this is a disease of complex origin and that very little is known of its etiology or pathology. It is supposed to be a reaction to some foreign protein substance. It is an acute or chronic disorder of the skin, characterized by wheals, usually raised and may be white or reddened, inducing a varying degree of burning, itching and tingling, tickling, crawling, pricking, etc., with such general symptoms as anorexia, malaise, headache, elevation of temperature. It may be seen at any age, but usually between the ages of two and forty. Females seem to be more prone to urticaria than males. It is often seen in children and may occur in no-operative or in post-operative cases. The eruption may appear suddenly as a thunder out of a clear sky, or come on gradually. The wheals are changeable in color, distribution and form. They are evanescent; old ones disappear as new ones are formed. They may be the size of finger nail, or smaller, or they may be confluent. They may be rosy red or whitish, and are surrounded by hyperemic areola. They may appear in mouth and pharynx. The types are:

- urticaria annularis—in rings
- urticaria figurata—in gyrations from union
- urticaria vesiculosa and bullosa—vesicles and bullae
- urticaria papulosa—described as lichen urticatus
- urticaria tuberculosa—giant wheals—maybe the size of hen-egg
- urticaria hemorrhagica—denotes a complicating hemorrhage
- urticaria evanica and perstans—slow or rapid process of evolution
- urticaria solitaria—single lesion

urticaria factitia—where wheals may be induced by irritation (dermographism)

urticaria recidiva—chronic form, lasting for years with new lesions forming

urticaria urticatus—of childhood, not many lesions

urticaria pigmentosa—usually seen in children. Lesions pigmented

uricaria gigans—or angioneurotic edema. Face, genitals and extremities.

Etiologic factors may be:

(a) toxic substances in sensitized individuals, as antitoxin, vaccine, etc.,—a foreign protein reaction;

(b) foods,—acute attacks from any indigestible food. Hypersensitiveness to food may be acquired or hereditary. Foods that often cause urticaria are shell—or other fish, sausage, eggs, pork, cheese, strawberries, oatmeal, pickles, nuts, canned fruits, meats and vegetables;

(c) drugs, as quinine, salicylates, balsam, turpentine, antipyrin;

(d) intestinal parasites, probably by their action on food;

(e) psychic disturbances, as fear, anger or shame;

(f) in connection with malaria, prurigo, dermatitis herpetiformis, obstructive jaundice, purpura or syphilis;

(g) hydatid cysts ruptured in abdominal cavity;

(h) irregularity attending menstruation and menopause;

(i) bites or stings of mosquitoes, wasps, gnats, bees, fleas, bed-bugs and nettles; and

(j) a chronic form of undiscoverable origin.

The essential feature of the pathology is an edema of the corium. We used to think it was a angio-neurotic edema or neurosis, but it is now thought that the toxin is in the blood or deposited locally and acts on the vessel walls. Gilchrist says it is an acute inflammatory edematous swelling, due to local irritation by poisonous substances like insect bites, drugs, or to toxin in the alimentary ca-

*Read before the Fourth District Medical Meeting, Rocky Mount, N. C., November 10, 1925.

nal. Torok found a simple inflammation. Torok and Hori and Philippon say it is due to an irritant upon the vessels at the point of cutaneous lesion, and is not an angio-neurotic trouble. Unna found an acute spastic edema.

The diagnostic essentials are the rapid formation of the lesions,—which is usually recognized when once seen,—the peculiar sensation, and the history of origin and disappearance.

Among the many drugs which have been found useful are adrenalin, pituitrin, magnesium sulphate, magnesium oxide, citrocarbonate, sulphur and cream of tartar, yeast, laxatives, bathing lotions or powders, calamine lotion with phenol, lead water and laudanum, alkaline baths, starch mixtures, vinegar and water, whiskey and water, hot mustard foot bath, salol and kaolin, aspirin, calcium lactate and calcium chloride with acid free diet, quinine in malarial cases, sodium nitrite, nitroglycerin, pilocarpin, atropin, fluid ext. jaborandi, salvarsan, intravenous Fischer's solution.

The prognosis is usually good for disappearance in a few days; sometimes a few hours.

REPORT OF CASES

Case 1.—A. D., married white man, age 34, had a badly bruised and lacerated hand and forearm which became in-

fectured and he developed a general septi-cemia and had an urticarial rash. He died on the sixth day after admittance.

Case 2—J. G. A white boy aged nine. After appendectomy he got along unusually well until the third day. He was constipated and developed urticaria all over. It cleared up in two days with enemas, salines, adrenalin and careful diet.

Case 3—B. P. White boy, aged six. Had a chronic purulent otitis media and bad tonsils. He developed urticaria and was brought into the hospital. He was given adrenalin and the ear treated, bowels kept open, and he cleared up in two days, with no recurrence.

CONCLUSION

The cause of urticaria is still in controversy. Urticaria does occur as a post-operative complication. Post-operative urticaria may be warded off by careful post-operative treatment.

There is some form of toxin liberated which deserves more research study.

Urticaria may be cleared up readily, but it is very annoying to the patient, and there is no assurance that it will not return.

All the profession seem to agree that it is due to a foreign protein of some nature not yet understood, and that neuroses play an important part.

Dr. R. Z. Linney, a prominent physician of Charlotte, died suddenly of apoplexy in the early morning of January 20, soon after his return from a meeting of the Mecklenburg County Medical Society. Surviving him, in addition to his widow and a son, Zack Linney, now a senior student in medicine at Chapel Hill; a brother, District Attorney Frank Linney, of Boone; three sis-

ters: Mrs. W. D. Deal of Taylorsville; Mrs. J. C. Dorsett, postmistress of Spencer; and Miss Blanche Linney of New York.

Dr. Linney was educated at Trinity College and Jefferson Medical College. Interment was at Taylorsville, his birthplace, and was attended by a host of friends from Charlotte and from the whole county of Alexander.

SOUTHERN MEDICINE AND SURGERY

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*A journal for the promotion and diffusion of
usable medical knowledge.*

Why You Should be a Member of the Tri-State

Our inherent tendency here in the South to transform every assemblage into either a social or a political gathering makes our meetings always interesting, generally enjoyable, but only sometimes informative. We are an exceedingly sociable people. Our interest is in folks and in their doings. I am thoroughly unable to understand how a real scientist could arise out of the Old South. But that has happened. I use that last word advisedly to indicate the unexpected. It is as natural for the blood of the Old South in the youngster even of today to manifest itself easily through gracious hospitality as it is for a Scotchman to think his theological thoughts. Northerners and Westerners and Canadians sense that very quality in the air here in the South when they come amongst us to a medical meeting. The members of the American Psychiatric Association felt and enjoyed keenly the warm hospitality of the South in Richmond last May at the meeting of that highly scientific body. It is a wonderful thing—that Southern warmth of welcome, that genuine gladness that the visitor has come into the city or into the home. He is a guest even if he be only a delegate

from Kansas to a convention of Hardware Merchants in San Antonio.

And in our sociability even there is some quality that commends itself. By contact with others we unwittingly and unconsciously learn. We absorb knowledge. We learn to appreciate the point of view of the other man. Contact tends to neutralize antagonism. Generally we like best those we know best. Our criticisms as a rule are directed against those we know slightly. Close acquaintanceship with another often brings to us the discovery that we dislike not the real individual but only our mistaken conception of him. Our intimate social intercourse here in the South has taught us the truth of these things.

But sociability should not be allowed to destroy the purposes of a medical society. It should not be permitted to interfere with the discussion and the contemplation of the causes of the sicknesses and the deaths of human beings. These latter problems are those that mostly engage the attention of a medical meeting. Golf and fishing and baseball and oratory and dinners and dancing should not be allowed to take the place of scientific discussions or to divert attention from a medical program. I hold tenaciously to the belief that it is not the function of a medical organization as a body to provide entertainment for the visiting members of a medical meeting.

The Tri-State Medical Association is a scientific medical organization, interested only in the discovery and the dissemination and the application of medical truths that will be helpful to people in their daily lives. The Association has no other organization within or alongside of itself. It meets in one session. All the papers are read and discussed before all the members. General practitioners and specialists and medical teachers all meet on a common level, inspired by a common purpose. The Association discourages oratory and debate. It encourages clear-cut thinking, concise statement, crystallized conclusions, and practical advice. The

body knows nothing about medical or any other kind of politics. Cliques do not exist within it. The meetings are held without the fanfare of preliminary exercises, and without the distractions caused by entertainments. It is a medical organization in whose age the old doctor has pride and in whose youthful vigor the young doctor has hope. It is the medical assemblage in which the young medical man may expect a careful hearing and a philosophic discussion of his presentation. The Tri-State Medical Association maintains its own official organ—Southern Medicine and Surgery—in which the proceedings of each meeting are published in full. Publication of the papers and the discussions begins immediately after each meeting, in the March issue of the journal. Southern Medicine and Surgery is a clean, ably-edited journal. Nothing objectionable appears in its advertising pages. The journal affords a medium for the expression of medical opinion, and its pages are available for the use of any reputable physician who has a message. It is well that the method of bringing the transactions out in book form has been abandoned. That method is now archaic, and out of keeping with the spirit of the times. People have a right to demand publication of news while it is news—and not after it becomes hoary with age.

For the first time in the history of the Tri-State Association the approaching meeting will be attended by the Governors of the three States. Each Governor will voice his appreciation of the work of modern medicine in helping to push civilization forward.

It is earnestly hoped that every member of the organization may find it possible not only to attend the meeting in Fayetteville on February 16-17, but that he will bring a neighboring doctor with him who is not so fortunate as to have fellowship in the body. For some reason profoundly incomprehensible to me there are still in the Carolinas and Virginia a few doctors who are not mem-

bers of the Tri-State Medical Association. What a strange state of affairs!

Jas. K. Hall,

Secretary-Treasurer Tri-State Medical Association.

A Seldom-Stressed Function of a Medical Society

The constitutions of most organizations of medical men set forth the objects of these bodies,—the spread of knowledge, the promotion of harmony, service to humanity,—and so on.

So far as is known to the writer not one body of doctors has a constitution which properly emphasizes a function which is second to no other in importance; namely, that of coming to the defense of a member who is assailed, and giving aid and comfort so long as he is not shown to be unworthy.

At its regular meeting on the evening of February 2, the Mecklenburg County Medical Society took action which it is hoped, will serve as a precedent for other medical societies when occasion arises for the exercise of this function.

At the conclusion of the set programme, Dr. John Hill Tucker took the floor and outlined the treatment accorded a fellow-member of the society, Dr. C. S. Britt, chief physician of the local Veterans' Bureau, following an accident on the highway early in November, in which Miss Ruby Helms lost her life.

Dr. Tucker, who acted as bondsman for Dr. Britt, reported that he had gone to the police station at the request of Mrs. Britt, and had found the prisoner jailed, charged with a "crime on the highways," and under the conditions alleged by the attorneys cut off from all communication with attorneys or friends, threatened and cursed by police officials.

In reviewing the case Dr. Tucker declared that Dr. Britt, whom he cited as a veteran of the war, a legion member and a respected member of the society, had been called from his bed on a night in last November to carry "a drunk and delirious man" to a sanitarium at Greensboro; that in the course of the trip he had seen a girl lying pros-

trate on the road and a man, evidently in distress, waving for aid; further that he had stopped the machine to render assistance, had reported the matter to the police and had been thanked, later being arrested, cursed, threatened and coerced, and that only through information conveyed to Mrs. Britt by a newspaper reporter had information as to conditions reached her ears.

Following statements that certain members of the police force had, after the acquittal of Dr. Britt, told an employe of the veterans' bureau that "Britt is as guilty as a dog; he killed that girl and then lied about it," Dr. Charles L. Nance took the floor and declared that he had heard Chief Ferguson make a similar statement.

Following the preliminary discussion Dr. J. M. Northington offering the following resolution which, after favorable discussion, was unanimously adopted:

"Whereas, it has come to our knowledge that Dr. C. S. Britt, a member of this society in good standing and whose conduct among us has been such as to inspire our confidence in the uprightness of his character, was, by police officials of the city of Charlotte, arrested and confined for more than six hours, his repeated requests that he be permitted to communicate with his wife and friends ignored or denied; and

"Whereas, he and his attorney were denied the privilege of appearing at the coroner's inquest in which evidence against him was adduced, and on which followed his indictment by a grand jury; and

"Whereas, by publicity through the newspapers and by other means, great injury was done this member; and whereas, at the subsequent trial in superior court, after hearing all the evidence presented by the prosecution, his honor, Judge James Webb, dismissed the case against Dr. Britt and stated, 'The state has not presented one scintilla of evidence to connect the defendant (Dr. Britt) with this case outside of his own admission that he stopped to render aid';

"Therefore be it resolved:

"First—That the Mecklenburg County Medical Society expresses the esteem in which it holds Dr. C. S. Britt, as an upright man and a capable physician, entirely innocent of the charges which have been brought against him;

"Second—That it utterly condemns the action of the police department of the city of Charlotte for its unlawful action in denying Dr. Britt the privilege of communication with his wife and with friends, who would have been glad to, and did at their earliest opportunity, arrange bond; and in giving out prejudicial information to the newspapers in which Dr. Britt was unfairly and unlawfully represented to the public as a criminal; and

"Third—That a copy of these resolutions be spread upon the minutes of this society, one sent to Dr. Britt, one to the commissioner of public safety of the city of Charlotte, one to the mayor of the city of Charlotte, one to each of the daily papers of Charlotte with request for publication; and one sent to the Director of the Veterans' bureau, Washington, D. C."

Dr. R. F. Leinbach, president of the society, called attention to the human relationships which exist in this society, to our obligations to and control over the actions of each other. He stated that, had the charges against Dr. Britt been substantiated it would have been the duty of our board of censors to take cognizance of the case and pass on it on its merits. Dr. Leinbach concluded with, "But we do not consider him guilty in any respect."

The most astonishing feature of the proceeding was the unanimity with which the members passed this measure. From a long and intimate acquaintance with the ways of doctors, it might well have been anticipated that some timid soul would manage to get to his feet and say that, while he agreed with what had been said, he doubted the wisdom of placing ourselves on record as criticising; that he was in favor of expressing our confidence in our abused brother but thought we should stop there. Strangely, nothing of the kind occurred and the only suggestion made

as to modification of the resolutions, as offered and passed, was that they be made more sweeping.

Doctors have the unenviable reputation of not working together for the common good of the profession, as do other bodies of professional men. We must admit that this reputation we deserve. There is not that whole-hearted joy in each other's success, or that eager championing of the cause of a distressed fellow-doctor that there should be. Conditions have improved; but in many instances the information that a strong competitor has been obliged to go to Florida for his health, is an affliction which one is able to sustain with a degree of equanimity truly remarkable; and the impulse to gratify his petty spite, or vanity, or to promote his pecuniary interests, will frequently induce a doctor to say those things he should not, or leave unsaid those things he knows he should say in defense of an absent brother.

We trust that the action of the Mecklenburg County Medical Society is the harbinger of a day when we will really "dwell together in unity." Encouraging and upholding the worthy brings about excellent results all 'round: those upheld are bound by a new feeling of gratitude, and those who render the assistance are suffused with a generous glow, all which can not fail to promote harmony and good.

There is also working in this society a strong and growing sentiment for punishment or expulsion of members who deliberately prostitute the privileges of a doctor to unworthy ends; in other words, there is a strong feeling for substituting reason for maudlin sentiment in dealing with these offenders.

Thus by performing such acts as will draw the worthy members closer, and will cause the unworthy to mend their ways or suffer expulsion, we can hope to develop a society which will perform all its functions and set an example worthy of emulation on every hand.

The Cost of Hospitalization

So great has been the increase in the cost of hospitalization that only a small percentage of our citizens can afford this luxury. It is true that a considerable percentage is hospitalized in pay beds, and most of these bills are eventually paid; but that does not mean that it can be afforded.

Hospitalization and trained nursing so constantly enter into the same case that they will be considered together. It's a far cry from 1895, when, according to Dr. Geo. W. Pressley, private room, board and nursing in St. Peter's Hospital, Charlotte, cost from 3 to 5 dollars *per week*, to this present day of grace, when the cost has mounted to 4 to 8 dollars *per day* for room, with nursing at a cost ranging from 5 to 20 dollars *per day* additional. These are estimates of local charges and are quite conservative. In one large New York hospital rooms are 5 to 15 dollars per day and one graduate nurse's service costs 12 dollars per day. Still a private hospital which can show a profit from its operation is a rarity indeed!

Since it has come to pass that so many persons live in hotels, apartment houses and clubs, a large proportion of the population have no home facilities for care during illness and must go to hospitals. Perhaps a larger factor in the increased utilization of hospital beds is an unreasoning idea that being enclosed by bricks built into "hospital" walls will, of itself, conduce to recovery. In many, if not most homes, the household arrangements are such that any ordinary case of illness may be seen after entirely adequately; moreover in many of these a graduate nurse does not fit in, and a neighborhood nurse, or one of the family, can minister to the needs of the patient for more effectually as well as more economically.

Some years ago it was a general custom, except in instances of tiding over an emergency for a nurse to be on what was called "twenty-four hour duty." Of course she was not actually on duty constantly; she had two or three hours for a walk; she could generally sleep un-

disturbed through six or eight hours of the night, and as the patient improved her duties became very light indeed. Now, we understand this practice has wholly passed; presumably it was found difficult to distinguish between "twenty-four hour duty" and twenty-four hours of work. Certainly, at the worst, her duties were light as compared with those of the wife and mother in the average home during even a trivial illness.

Then, if patients be encouraged in the idea that they must be in hospitals and have graduate nurses in every case of illness, and these patients cannot pay for such accommodations, what is the next step? Some say hospitalization at the expense of the State!; and when the majority who cannot pay insist on going into a hospital and being nursed through every illness, with the State paying the bills, is anything more reasonable than to assume that there would follow the demand that a medical attendant, also paid by the State, be provided to supplant the private physician?

Undoubtedly many a patient's chance of recovery is materially lessened by worrying over the fact that his illness is costing him more each day than he can possibly make in a week when he is well and active; what more natural than that he should seek escape from this expense and worry by voting for the establishment and maintenance of a system of treatment for the sick at the public cost?

This is no attack on hospitals or nurses. It is written as much in the interest of private hospitals and private nurses as of private doctors; for all of us are dependent on the fees paid by private patients. If they are taught that they must have, in every illness, the expensive accessories for cure which are needed only in exceptional instances, they will demand that the State supply them, since they cannot pay for these "necessities" themselves. Then would soon be brought to pass a condition in medical care analogous to that existing in education today, the overwhelming majority of hospitals being publicly

owned and staffed by doctors on salaries, with a few privately owned hospitals and a few doctors in private practice for those whose attitude toward this public care for the sick would be the same that a few manifest toward the public school system today.

Hospitalization and graduate nursing are necessities at times, and then they are among the greatest boons of mankind. When they are indiscriminately ordered in order that the doctor may assemble his patients for his own convenience, that he may get the reputation among the nurses of "keeping the hospital full of patients," or for any other reason than reasonably meeting the needs of the patient's case, they are grievous burdens imposed on already overladen shoulders.

One of the most pressing needs of our time is that of reducing the cost of illness. We should apply ourselves to it diligently and rationally; discarding all such generalities as "getting the best for a patient" (which seldom means anything except *most expensive*) never advising a patient to enter a hospital for treatment or to employ a trained nurse unless we ourselves would do the same under the same circumstances; and, in the interest of those who must have such care, obtaining information from every available source on economical hospital operation; and, finally, conferring with local bodies of graduate nurses as to means of meeting the nursing needs of the great majority of all patients,—those unable to pay present charges.

Unless something effective is done along this line, many thoughtful persons conversant with the situation believe that a generation or two hence as large a proportion of the total of sick persons in the country will be in State-owned hospitals, attended by doctors on salary from the State, as is the proportion of children of school age who are enrolled in our public schools. In other words *State Medicine will have arrived*.

OPINIONS AND SUGGESTIONS

Richmond, Va., February 1, 1926.

Dear Dr. Northington:

At one time "Southern Medicine and Surgery" carried a number of unethical advertisements, and as the journal was the official organ of the Tri-State Medical Association of the Carolinas and Virginia, I felt free to openly criticize its business policy.

Under its present editor, Dr. James M. Northington, the evil of which I complained has been corrected and I feel it is now both a duty and pleasure to give the publication my hearty endorsement.

Its advertising pages are clean, its editorial columns are original, its news items are interesting, its special departments are edited by men of recognized ability and its original articles are carefully selected and varied to suit its subscribers.

I read each issue of "Southern Medicine and Surgery" with interest and profit, and I can testify it lives up to its claim of being "A Journal for the promotion and diffusion of usable medical knowledge."

Very truly,

Stuart McGuire.

Wilmington, N. C., February 2, 1926.

To the Editor:

Your journal is a success and it is gratifying to see that you are improving it month by month. The quality of the contributions is notably different and it is obvious to those of your readers who sometimes write that you are not accepting everything submitted. The success depends on quality and quality will be in direct proportion to the number of rejections. Your contributors should not take exception when a manuscript is returned but should profit by it. I trust no man in the section reached by your journal will wield enough of that certain kind of influence which will insure the publication of anything he sees fit to submit whether it be good or bad. There is no suggestion of such special privilege accorded any

one in the journal as now conducted and I trust never will be. This makes the greatest improvement possible to any journal.

I propose to continue to urge my younger friends in the profession to send you their good work. This is the highest endorsement I can make. You are then left with a heavy responsibility, for the future of these young men in the profession will be made or marred by their writing and the journal to which their early efforts are sent must be of a high order to keep their motives and incentives above the low plane of mediocrity. A journal of the sort that is obvious you intend this to be become, is, as I have before written you, one of the most influential educational institutions. If you keep the aspirations and expectations of both your contributors and your readers on the higher things of medicine you at once become one of the greatest educational influences. It is not often that a great leader in medical thought is evolved who had not had close contact with medical literature making. I have thought that one of the greatest influences in making great Sir William Osler was his continuous contact with the conduct of medical publications; he not only wrote but he edited throughout his whole professional career.

No other journal has the opportunity you have because of several vital factors. Geographically you have the advantage of the tropical and the temperate medical conditions with a large element of semi-tropical conditions which are most interesting and important of all. You cover a territory not touched by any other local publication of high order. You have a class of medical men unexcelled by and state and equalled by very few if any at all.

You may expect my support as long as you continue your present course.

Edward J. Wood.

Statesville, N. C., February 1, 1926.

Dear Dr. Northington:

Your recent letter asking an expression of opinion regarding The Journal has been received. It is with pleasure

that I give such.

The publication is unquestionably handled in an energetic, progressive, and strictly ethical manner. Under such a management only worth-while medical literature has appeared. The need for such a journal in this section is obvious.

This magazine can exercise another function in addition to serving as a medium of expression for many meritorious articles by members of the profession in this state. This is indeed an important function. However, it can also, if properly supported, very effectively mould medical opinion in North Carolina along constructive lines.

I sincerely hope that The Journal will continue to prosper.

With kindest personal regards, I am

Very truly yours,

V. K. Hart.

Richmond, Va., February 1, 1926.

Dear Dr. Northington:

I have kept in close touch with with Southern Medicine and Surgery every since you took hold of it and I wish to express to you my hearty congratulations on your having made it one of the most ethical, reliable and useful journals in the country. I have no criticism of the plan of publication and I think you have gotten remarkably good material for the journal and wonder how you do it. Please accept my best wishes for the continuation of your constructive work.

Most sincerely yours,

Beverly R. Tucker.

Lilesville, N. C., Jan. 18, 1926.

Dear Dr. Northington:

Many thanks for your letter of the 15th, 1926. I am glad to note that I bear the distinction of being your first subscriber to Southern Medicine and Surgery. I enjoy your journal and it really is a great help to me and I am sure to others.

I do think, however, for the edification of many doctors in the rural districts, simple problems dealing with every-day occurrences, should be given a more prominent place. Now, for instances, ----- Dept. of ----- does

not help the country doctor much, but a few good and well proven prescriptions would be of great help to him in reviving and keeping the doctor keen on prescription writing and aid him in steering a course away from *gunshot proprietary medicine that cost him anywhere from \$9.00 to \$14.00 per gal.* A few extracts similar to this would be of great benefit I think:

For intense itching. Have you ever tried this one?

Rx.

Pulv Calamine.

Pulv. Zinci oxidi.

Glycerine aa dr. 1.

Lime water. oz. IV.

M. Sig.: Shake well. Apply to itching surface on a piece of linen.

I have a case of infantile (18 mos.) eczema, treated for months without success. Specialists failed. Case under observation about two months. Treated under my care thus: Not a drop of water to skin. Vegetable and orange juices. Mother to stop nursing baby. Externally melted beeswax applied copiously to surface every two days.

Internally: 5 grains sodium cacodylate intramuscularly in gluteal region every three days.

Child put on weight rapidly, beginning to take notice and play with other children in family.

I only mention this as an instance. I am of the opinion a little of this kind of stuff would be received with relish and appreciation.

Again thanking you for letter, I am, sir,

Yours sincerely,

N. P. Liles.

Richmond, Va.

February 3, 1926.

Dear Doctor:

I take pleasure in saying that under your stewardship "Southern Medicine and Surgery" is not only a most creditable organ of the Tri-State Society, but it is a magazine that any member of the profession should be glad to have on his desk. In saying this, I have in mind its editorials, its medical papers, its abstracts and its advertising

columns.

Very truly yours,
W. Lowndes Peple, President.

Asheville, N. C.,

January 30, 1926.

My dear Doctor:

I trust the enclosed paper may help you out. The modern doctor wants only original observations and there are not enough of these possible to go round, but if this thought on modern therapy helps, you are welcome. I do trust your excellent efforts for Southern Medicine and Surgery are being successful; they certainly deserve it.

Cordially yours,
C. L. Minor.

Winston-Salem, N. C.

February 4th, 1926.

My Dear Doctor:

Permit me to thank you for your very kind and courteous letter of recent date; and also to assure you of my good will, and good wishes, for success in the conduct of Southern Medicine and Surgery. The last issue presented two features which should appeal to every reader. First, as a "press product," it was pleasing when you opened it; in clear, good type, and not over burdened with advertising matter. Second, and most important of all; the "papers" all (save one, the gas tank product), were both interesting and instructive. And, you know, Doctor, that it is this, the educational feature, that gives to a journal its value.

I have heard of the probability of Southern Medicine and Surgery becoming "Society owned." The problem presents two sides, upon each of which you will find points for discussion. With your permission, I will give you "my side," and, if it serves you for the highest development of your journal, it will accomplish the aim with which it is given.

"'Tis true 'tis pity, pity 'tis 'tis true," that groups of men, in our profession, under "Political Control," do not achieve the highest plane of service; (with human elements involved, and vital issues

at stake). Men with "Ideals," and men who meet squarely, and solve fairly, the problems confronting them, are filled, first with disgust; and afterward with discouragement; and, in seeking other groups not so dominated, (and, of such there are a few), find sympathy in thought, and life, and work; with inventive, and inspiration as an urge. This, if you please, is not "desertion," but seeking, rather, the fount from which pure water flows; that we may bring it back, and vivify the sluggish stream to altruistic goal. Furthermore, men in political control, of either groups of their fellows, or of journals, while they are wonderful organizers, and publicity managers, most often are neither Surgeons, nor Clinicians; therefore, they cannot "read between the lines;" and, in teaching, it is only truth that counts.

Now, these thoughts in the lead, will you forgive me, for holding the opinion that under "Society ownership," you journal will sacrifice its prestige and dignity; the "worthwhile," and distinctive features of our professional life. Furthermore, to me it is a certainty, that there are "would be" contributors to its pages, who would not care to have their thoughts published in a journal thus controlled.

Please forgive me. This is all on one side; but it gives you, my friend, the vision that has led me throughout a lifetime; and, you know—

Thoughts are the soul of it,
 Making the whole of it,
 Blend into unison—
 Visions Divine.
 Come! beck's the best of us,
 Leaving the rest of us,
 On! to the goal of this vision
 Of thine.

Yours,

H. S. Lott.

Charlotte, N. C., February 6, 1926.

Dear Dr. Northington:

I think the profession of the State has a cause for congratulation on the high standard on which Southern Medicine and Surgery has been conducted

during the past year under your leadership.

I again wish to assure you of my earnest desire to see the journal go forward. I believe it will, for a real Medical Editor has been discovered by those who read the Journal.

With the best of wishes for the New Year, I am

Sincerely yours,
John Hill Tucker.

Statesville, N. C., February 3, 1926.
Dear Dr. Northington:

I have just received your letter of January 30th and am glad indeed to express my opinion of the Journal.

It is absolutely necessary for the medical profession in North Carolina to have a well conducted journal. The rapid changes which are taking place and matters of vital importance to the profession which are coming up with increasing frequency, make it necessary for the members of the medical profession throughout the state to maintain "contact" with each other, and this can be best accomplished with a journal published right here in our own state.

I am well pleased with the way in which Southern Medicine and Surgery is edited. The medical profession should certainly support this journal and give you every co-operation and assistance.

With kindest personal regards and best wishes, I am

Sincerely yours,
James W. Davis.

Charlotte, N. C., February 5, 1926.
Dear Dr. Northington:

I have intended sending you a paper on the Advantages and Disadvantages of Modern Anesthesia, but there are so many interruptions, telephone and so forth, at my office, that so far I have been unable to do so. When I go home in the evenings I have to entertain or amuse the family with a game of bridge or the movies or go to prayer meeting, which prevents me from carrying out my plans at home. As a result, I have about decided to go to New York or Miami where I can have quiet and rest

in order to complete this paper for your journal.

In the meantime, I want to tell you as you probably know that I was associated with the Charlotte Medical Journal for ten years with Dr. E. C. Register and was associated with Southern Medicine and Surgery for four years with Dr. Townsend, and I know something of the ins and outs in the publication of a medical journal.

It gives me great pleasure to tell you that I enjoy your journal very much. I read it carefully each month and always find something very valuable in its contents, just the kind of a journal the ordinary common doctor needs. I think we are all losing a great opportunity this journal affords us in not writing short papers on the ordinary things that happen in our work from day to day. It would help not only the people who read it, but the writer as well, and I want to make you a weak promise that I am going to do better in the future.

I wish you every success in your efforts and feel sure success will follow.

Sincerely yours,
J. C. Montgomery.

Greensboro, N. C., February 5, 1926.
My dear Major Northington:

I am in receipt of your favor of recent date asking me to express my opinion as to your conduct of Southern Medicine and Surgery.

I am glad you have asked me to do this since I have watched with much interest the ethics of the Journal as you now conduct it. My personal knowledge of North Carolina medical journalism goes back to the days when our State Medical Journal was published by Dr. Thomas F. Wood, than whom North Carolina never produced a greater physician or editor.

While medical journalism, like everything else human, has evolved; yet it is interesting to note that the ethics of the profession of North Carolina, as is evidenced by the Transactions of the State Medical Society and the several medical journals published in the state, have generally been of the highest order

based as they are upon Hippocratic oath and our code of ethics.

Let us go back to our birth as an organized profession in the state. Those of us who are familiar with the history of our profession know that the first State Medical Society was organized in 1799. The Medical Repository, Volume IV, New York, 1801, page 202, says in speaking of this society,—"from the zeal and enterprife of the gentlemen who compofe it we trufs it will prove a Society of the firft respectability and ufe-fulneff." The 1799 Society organized a Board of Censors, which was synonymous with our Board of Medical Examiners, and examined applicants to determine their fitness to practice medicine. Charles Smith was the first to pass a successful examination before this Board, in the year 1800. This Society divided the state into Medical Districts and urged that frequent periodic district meetings be held. Much more might be said of this early Society but the above will give us an inkling as to our ancestry as an organized profession. With such a heritage could we do less than to bear aloft the Torch of Truth and Progress?

In my address in 1917 on the "Early History of the North Carolina Medical Society" I reviewed briefly the biography of a number of the founders. Among them was Doctor Warren, whose fame extended over three continents. I said of him: "Dr. Edward Warren was one of the most remarkable characters that ever belonged to the North Carolina Medical Society. You will recall that the Society in 1856 appropriated \$1,200 to establish a "Medical Journal." I surmise that he induced the So-

cietiy to give the \$1,200. He was elected editor of the journal and, be it said to his credit, ran it very successfully for three years, when he resigned and moved to Baltimore."

I take it that this was the beginning of the North Carolina Medical Journal, which is now edited under the name of Southern Medicine and Surgery, although I notice in your letter head that your journal is "Continuing Charlotte Medical Journal Founded 1877." You should trace your family tree farther back, certainly to Warren's day.

The true test of Medical Journalism seems to turn upon the ethics of what is published, both in the way of papers contributed and advertisements. This would seem to be a rational rule since it would not seem proper for our medical journals to publish or advertise matters that are not considered orthodox by the profession. Otherwise, the Journal would not reflect the real spirit of the profession.

Applying this rule of thumb to Southern Medicine and Surgery as you conduct it, I believe that the Journal is being run upon a high ethical basis. The best proof that I can give of this opinion is the fact that I carry my professional card and advertisement of the Wesley Long Hospital in your Journal. I can't help believing that a journal devoted exclusively to the upbuilding of medical science and the status of the profession is bound to succeed and receive the plaudits of all right thinking men.

I wish you and your Journal the most abundant success.

Sincerely yours,

John Wesley Long.

DEPARTMENTS

RADIOLOGY

JOHN D. McRAE, M.D., *Editor*
Asheville

Aneurysm of the Thoracic Aorta

Aneurysm means a widening. It is a more or less circumscribed dilatation of a blood vessel. Many types of aneurysm are described. They vary with the anatomical location, the pathological cause and the character or form of the lesion.

Anything which weakens the walls of an artery and permits it to give way and stretch under increased blood pressure may produce an aneurysm. There are traumatic aneurysms, aneurysms from simple or ordinary arteriosclerosis, and those which result from syphilitic aortitis. It is pretty well established that the last is the cause in the vast majority of cases. The two common forms which we meet with are sacular and fusiform, or spindle-shaped. The fusiform type may involve the whole of the thoracic aorta or a large part of it and it is difficult to decide whether we should describe a given case as a broadened aorta, not of pathological importance in elderly people, or a spindle-shaped aneurysm. Sacular aneurysms may occur in any part of the aorta but are most common in the ascending or outer surface of the arch.

Symptoms of aneurysm are those of pressure. Naturally the dilatation must attain considerable size before they are sufficiently pronounced to attract attention or to create a suspicion as to what is the real trouble. Pain varies with the structure on which pressure is exerted. Shortness of breath occurs as the result of interference with circulation. Next, each different structure pressed upon may cause its own peculiar symptom. A hard working housekeeper consulted her doctor because of loss of voice. Examination disclosed the fact that she had an enormous aneurysm involving the arch and immediately continuous parts of the ascending and descending aorta. No doubt

she had done her routine work, washing, ironing, house-cleaning and cooking for many months in the presence of this serious condition without symptoms.

Pressure on the pneumogastric has produced symptoms referable to the stomach, and the gastro-enterologist being consulted discovered the disease; a bronchus being compressed may cause bronchiectasis or even bring about collapse of part of the lung. Other symptoms are recognized on making physical examination, such as tracheal tug, thrill over the chest brought out by palpation and auscultation, a bulging of the chest wall where the aneurysm has made long continued and steady pressure against sternum or ribs.

I wish to emphasize the fact that all of the pressure symptoms mentioned and many others not mentioned may be equally well produced by mediastinal neoplasm or aneurysm and that there is often considerable difficulty in making differential diagnosis.

X-rays are almost indispensable in recognizing and differentiating aneurysm from other mediastinal conditions. One of the most spectacular x-ray demonstrations is the picture of a large aortic aneurysm. The examination is to be made with films and with the fluoroscope. The film should be made with a short exposure and with the x-ray tube at such a distance as to avoid any distortion because of its nearness to the chest. It will depict the thoracic organs clearly. Because syphilis is the commonest cause and because syphilitic aortitis is oftenest seen at the base of the aorta the aneurysmal dilatation will occur in most cases close to the heart, and may involve the aortic valve. Unless the valve is distorted the heart will probably not be enlarged. Sacular aneurysms project from the wall of the aorta and may be seen to expand with each heart beat in many cases. This point must not be given too much weight

for a good many aneurysms do not expand. This is because they frequently have rigid walls due to organized laminated blood clots or to calcium and fibrous tissue in the walls. The fusiform aneurysm pulsates visibly. On viewing the patient's chest fluoroscopically in different positions one is able to see pulsation if it exists, and to determine the origin of the tumor. By this means it is possible to differentiate between mediastinal new growths and aneurysms.

The x-ray study of aneurysms is indispensable in their diagnosis and differential diagnosis.

DERMATOLOGY

JOSEPH A. ELLIOTT, M.D., *Editor*

Diagnosis of Primary Syphilis

The early diagnosis of primary syphilis is of prime importance. The earlier the diagnosis is made and proper treatment instituted, the better the chance for an early eradication of the *spirocheta pallida*.

The clinical appearance of a primary sore is of great value in making a diagnosis. The lesion is usually single and first appears as a papule which soon becomes eroded. The borders are sloping and show evidence of a network of new blood-vessel formation, which we call the hemorrhagic border. The discharge is serous or serosanguineous. The base shows an early induration and as a rule the lesion is practically painless. Within a short time after the appearance of the lesion there is moderate enlargement of the neighboring lymph glands. If the lesion is located on the genitals the glandular enlargement is bilateral. The glands may be slightly tender on palpation but are usually not painful.

In establishing a diagnosis of primary syphilis we are frequently called upon to differentiate between it and a chancroidal infection. Chancroids are usually multiple and are always ulcerated lesions. The borders are ragged, undermined and show no evidence of new blood vessel formation. The discharge is purulent. The lesion is quite painful on palpation. If an adenitis is present it is unilateral as a rule, confined to one

gland and very painful.

From the clinical description of the two lesions it is evident that points of differentiation in typical lesions are well marked. In such cases, however, a dark-field examination should be made, if possible, to determine the presence or absence of the *spirocheta pallida*. In the mixed lesions we must rely on the dark-field examination for an early diagnosis. In case this examination is persistently negative for *spirocheta pallida* we should take blood Wassermanns at weekly intervals for at least six weeks.

We are frequently confronted with the situation that the patient has applied bichloride or other antiseptic dressings before reporting for a dark-field examination. Such a procedure should be avoided as the antiseptic kills the spirochetes in the superficial portion of the lesion and often makes it impossible to find them under the microscope. In such cases it is advisable to apply a suction apparatus to the lesion and obtain serum from the deeper portions of it. We may thus be able to find spirochetes when the ordinary method of collecting the fluid fails. In case the examination is negative after this procedure a saline dressing should be applied and daily examinations made for several days.

Inasmuch as the blood Wassermann does not usually become positive for two to four weeks after the appearance of the sore, it is very essential that a careful clinical and dark-field examination be made of all suspected sores. If the diagnosis is made in the first few days after the sore appears and proper treatment instituted, the course of treatment is materially reduced and the chance of a permanent cure is greatly enhanced.

INTERNAL MEDICINE

PAUL H. RINGER, S.B., M.D., *Editor*
Asheville

Nephritis

The medical world owes much to Henry A. Christian, Hersey Professor of the Theory and Practice of Physic at

Harvard University, but his greatest contribution has been, I feel, his simplified classification of the varieties of nephritis, and his clear analysis of the types of Bright's disease met with in daily practice.

When one looks back 20 years and sees the voluminous nomenclature with which diseases of the kidney were clothed and then turns to Christian's few definite headings, one is bound to feel that order has been brought out of chaos. Let us call to mind some of the terms in use in the first decade of this century:

Acute diffuse nephritis,

Chronic diffuse nephritis with exudation,

Chronic diffuse nephritis without exudation,

Chronic parenchymatous nephritis,

Chronic interstitial nephritis,

The large white kidney,

The small red kidney,

The contracted kidney,

Glomerulo-nephritis.

There are probably more. Now let us turn to the last classification that Christian has given, which follows:

Acute nephritis

Subacute nephritis

1. Subacute nephritis with edema

2. Hemorrhagic nephritis

Chronic nephritis

1. Chronic nephritis with edema

2. Chronic nephritis without edema

3. Vascular hypertension progressing into nephritis.

What a difference there is! Christian's classification gives us something we can tie to and expresses the clinical picture as clearly as can be done in a few words.

Christian points out that chronic nephritis with edema is a very rare disease. The edema in these cases must be of renal and not of cardiac origin and many nephritic patients present cardiac insufficiency which is the real causative factor in the production of the edema far more than failing kidney function.

Christian also stresses the point that patients in groups two and three of chronic nephritis almost invariably

show extensive vascular disease and that the renal disturbance is but a portion of the far more wide-spread vascular symptom-complex. He says: "in other words, a very large proportion of our patients, diagnosed as having chronic nephritis, are really patients with extensive vascular disease rather than chronic nephritis in the sense of a local renal disease."

We must all admit the truth of this observation. That brings to the mind of the editor the thought: Why the abandonment of the old term "cardio-vascular renal disease?" Here was a name, rather long to be sure, which well described the condition it denoted and at the same time permitted the stressing of the particular element, whether cardiac, vascular or renal, that dominated the picture in any particular case. Would not the resuscitation of this hyphenated name be a good thing?

Christian further says: "if more attention were focused on general vascular changes in this very frequent type of chronic nephritis (his types 2 and 3) rather than on renal function alone, we might obtain a better conception of the disease."

One of the charms of Christian's mastery of the subject of nephritis lies in the fact that for practical clinical purposes, he feels that much of the blood chemistry work now done is unnecessary. He believes in the phenol-sulphonphthalein test; he believes in knowing the N.P.N. (non-protein nitrogen); but he feels that more refined tests do not give further information of practical value.

A point brought out and one not generally recognized, is that many casts disappear when a urinary specimen is left standing. The 24 hour specimen has advantages, but the prompt examination of the fresh specimen will often reveal microscopical findings that may later on be missed.

It is refreshing to find a man of Christian's encyclopedic knowledge and wide clinical experience urging the importance of the stethoscope, the sphygmomanometer, the ophthalmoscope and the simple routine urinary examinations in

forming an estimate of the condition of the patient with chronic nephritis.

Frederick M. Allen and his associates at Morristown, N. J. have interestingly discussed clinical and experimental renal deficiency. They have not had success in reproducing satisfactory clinical renal deficiency by the chronic poisoning of dogs with the heavy metals such as uranium, but they have been able to study renal deficiency in partially nephrectomized animals. They find that dogs will not live if more than 75 per cent of their renal tissue is extirpated. They have found that with kidney deficiency hypertension occurs, but in varying degrees, an increase of usually not more than 20 to 30 mm. (systolic level of 180-190 mm.) being obtainable, and that the symptoms of nephritis predominate over those of hypertension.

They reach the following interesting conclusions: "clinical experience does not justify the widespread belief that either nephritis or hypertension is a disorder running a spontaneous, inevitable course. We know after six years of careful study that the great majority of hypertension cases can be brought and kept under control by a sufficiently strict salt-free diet. The progressiveness is halted and the arteriosclerosis, which in these cases seems to be largely secondary to the hypertension, appears likewise to be prevented. The same rule seems to hold for any form of chronic kidney disease. If the case is so severe that the symptoms cannot be controlled by treatment, the progressive tendency continues. If the symptoms can be controlled, and the blood chemistry kept anywhere near normal, the progressive tendency is generally abolished. The only exception to these rules arises from infection, which is both a primary cause and a cause of downward progress in most forms of metabolic disease."

"Both the experimental and clinical studies seem to place diabetes and kidney disease on much the same basis. The pathology of both is composed of a primary and a secondary factor. The primary factor is infection or intoxication, producing the initial lesions. The

secondary factor consists in a functional overstrain of the damaged organ. The hydropic degeneration of the islands of Langerhans is explainable on this ground and no other. Likewise the degenerative changes in the renal epithelium, which have been mysterious in cause and character, can probably in large measure receive the same functional explanation. Vascular disease or other local peculiarities may make the conditions less clear-cut in the kidneys than in the pancreatic islands. One difference must be recognized in the fact that functional rest of the pancreatic islands clears up glycosuria, while functional rest of the kidneys does not as a rule clear up albumin and casts. On the other hand, it is also known that albumin and casts are not trustworthy signs of the progressiveness of a case. With allowance for certain inevitable consequences of existing organic and vascular damage, the recognition of the class of secondary anatomic lesions due to functional overstrain should represent a valuable advance in the study of diseases of the kidneys. The clinical application is also important; namely, that for the most part hypertension and nephritis are not inherently progressive but are permanently controlled by adequate sparing of function."

Newburgh & Marsh and their associates in Ann Arbor have been conducting an interesting series of experiments on the dietetic factor in the etiology of chronic nephritis, paying particular attention to the effect of protein. They have selected three types of animals for experimentation: Rabbits, herbivora; rats, omnivora; dogs, carnivora, hoping thus to get as it were, a "cross-section" view of the results which would justify their more definite applicability to nephritis in man.

They find that the administration of an excessive amount of protein to all of the three classes above mentioned, causes renal damage with the appearance of albumin and casts, and histologically, by the finding of cloudy swelling and atrophy and dilatation of the tubules. They comment as follows: "How may these experiments be interpreted

in relation to the etiology of human chronic nephritis? Three answers are possible: (1) That protein is the sole cause; (2) that protein has no etiologic significance; and (3) that protein is one of several etiologic factors. That protein is not the sole cause of chronic nephritis is shown, among other things, by the fact that we have not in our experiments produced a lesion identical with that of human nephritis. Those who maintain that protein has no place in the etiology of chronic nephritis are supported by the fact that the data were obtained from animals. In answer, it should be pointed out that the injury was produced in rabbits, rats and dogs; it is difficult to conceive that a substance would damage the kidneys of herbivora, omnivora and carnivora without damaging the kidney of man. Furthermore, there is a considerable body of evidence tending to show that excess of protein may damage the kidneys of man. It is our belief that the third answer is the correct one, that excess of protein is a contributory factor in the etiology of chronic nephritis. For example, focal infection alone might not seriously damage the kidney.

Excess of protein alone might not seriously damage the kidney. Focal infection and excessive ingestion of protein in the same subject are a combination of circumstances that commonly results in chronic nephritis. While a certain amount of protein is essential to life, it is our belief that amounts much beyond the requirement are nephropathic.

SURGERY

A. E. BAKER, SR., M.D., *Editor*
 Charleston

Abstract of Article on Colelithiasis

The following is an abstract of an article by Moynihan, entitled, "Preliminary Observations upon Cholelithiasis."

In an investigation of cases of cholelithiasis the conclusion has been reached that two factors are of chief importance in respect of causation: infection, and an increase in the cholesterol content of the blood.

Infection may be derived from any source; from the teeth, from the facial sinuses, from any part of the alimentary canal, from the urinary system; from other foci within or with-

out the abdomen. Theoretically there is no infection which cannot, when uncontrolled, gain access to the blood and so find its way to any part of the body. The infections so arising find their way to the gall bladder by several routes. If they are alimentary in origin they may ascend from the duodenum along the common duct; they may reach the liver through the portal circulation, and thence descend with the bile. They may be borne by the blood, or by the lymph stream; or may attack the gall-bladder by direct invasion from a neighboring organ. Immediate effect produced on the gall-bladder varies in different instances. If contaminated bile is the direct source of the infection the mucosa is first attacked, and the inflammatory changes pass outwards through all the walls of the gall-bladder. If the disease is blood-borne, little clumps of organisms are first seen in the submucosa, and a crowd of leucocytes surrounds them. The inflammatory process thence extends inward to the mucosa and perhaps outward to the peritoneum. The infection of the gall-bladder found in typhoid fever seems to start with great frequency in this fashion. If the invasion occurs through the lymph or by direct contiguity, the serosa is first infiltrated by organisms which make their way slowly inwards towards the mucosa. Sections made of the gall-bladder have demonstrated quite clearly these several paths of infection. In cases of multiple gall-stones infection is invariably present in the gall-bladder wall. The view has been expressed that infection is the consequence and not one of the chief causes of the development of calculi. Such evidence as he has been able to gather seems to indicate quite indisputably that infection always precedes the deposit of stones. Indeed, our search now inclines to the recognition of infection in the gall-bladder during the period before the stones are formed. The most frequent agent of infection in the gall-bladder is the bacillus coli. It is found in all stages of cholelithiasis from the earliest to the most advanced. In many cases of cholelithiasis a history of other forms of bacillus coli infection, especially of the urinary tract, may often be elicited. Women are afflicted with gall-stones at least twice as often as men. They are apt to suffer from bacilluria and in the periods of pregnancy, pyelitis or cystitis of bacillus coli origin is no uncommon event. There would appear to be a connexion between the infections of the urinary tract and those of the gall-bladder. Walton in particular has emphasized the truth of this observation.

The infection which sets going a process of calculus formation must be mild and is often recurrent; it waxes and wanes. If it is severe an acute cholecystitis develops, and gangrene or perforation may occur. As this acute infection subsides it may leave a crippled gall-bladder incapable alike of secreting or of discharging its contents; and stasis and a milder sepsis may then together lead to the growth of

stones. We do not at present know why in one case cholesterin is the chief constituent of gall stones, and why in another calcium is the component. The connexion between a preponderance of cholesterin in the stones and a high cholesterol content of the blood is clearly suggested by our experience, to be presently mentioned, and calcium is doubtless an evidence of a subdued, though persistent, local infection, and perhaps, too, an evidence of a deranged calcium metabolism of which, in this connexion, he knows nothing. The infective origin of multiple gall stones can hardly be disputed; and the aphorism which he ventured to express many years ago that "a gall-stone is a tombstone erected to the memory of the bacteria within it" remains true. These buried organisms are not always dead. I have found typhoid organisms viable twenty-eight years after the occurrence of typhoid fever, and Finney relates a case in which living typhoid organisms were found in the center of gall-stones thirty-five years after an attack of enteric fever.

When stones have formed in the gall-bladder the morbid changes are generally extensive and well advanced. It is certain that the walls of the gall-bladder are deeply infected, and the muscular layer destroyed; in many cases the infection has spread from the gall-bladder to parts around as is indicated by significant adhesions. Hepatitis in an early or advanced stage is often, though by no means always, present and the pancreas is not seldom affected. In a large proportion of cases a condition of chronic appendicitis is found, and to all appearances is often of an older date than the disease in the gall bladder. In a small proportion of cases ulceration of the duodenum, or of the stomach, or of both, may be found also. The research work of the surgeon has shewn the close affinity, the common causation or the etiological relationship between these several diseases.

The results of drainage of the gall-bladder were often good, but they were bad in too large a proportion of cases; for stones recurred, carcinoma sometimes developed, and the symptoms of an infected gall-bladder persisted. Removal of the gall-bladder was at first found difficult; the mortality was certainly a little higher, and the complications which ensued, due no doubt to lack of technical experience, were occasionally disastrous. But surgery is growing out of the sins and indiscretions of its youth. Cholecystectomy rightly performed is as safe as drainage of the gall bladder, and the after-results are far more satisfactory.

The first problem is to decide, in the absence of gall stones, as to those appearances of the gall-bladder which justify its removal. What are the signs of a diseased gall-bladder? It is his opinion that a gall-bladder is infected when it has lost its normal blue color, or its sheen; when it has lost its suppleness and its walls are thickened by fibrous tissue, or by the

deposit of fat, especially along the lines of the vessels; when the cystic gland is definitely enlarged and changed in structure; when adhesions have been contracted to the parts around, especially to the duodenum, or the stomach, or when the cystic duct is thickened and the pelvis of the gall-bladder has settled, in a mass of adhesions, firmly down upon the common duct.

It is essential that a drainage tube be left in the wound. He has closed the abdomen without drainage after the removal of the gall-bladder on many occasions, but he never does so now. A small tube does no harm; it leaves no gap in the abdominal wall if the rectus muscle is displaced outwards and it gives a measure of safety obtainable in no other way.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

For Best Results in Fracture Cases

In the treatment of fractures restitution of function is the chief therapeutic obligation. Recovery of function is more prompt and more complete as inhibitions of function are less complete and prolonged. The authors have given an interesting resume of the surgical eras through which the treatment of bone injuries have passed; how knowledge has been gained during these eras and how that now when things appear better, some general axioms may be ventured to guide the worker. While these axioms may not be subscribed to in their entirety, they show study and effort on the workers' part, and are given as they propose them.

1. Treat the patient suffering from a fracture and not the fracture complicated by a patient.
2. Adopt such procedures as will interfere the least with general and local activities and which will permit the earliest resumption of unrestricted activities.
3. Attempt to secure with the least traumatism the reapposition essential to functional recovery. If impaction is present and position of fragments is compatible with recovery of function, do not meddle. If spontaneous reapposition has occurred and the fragments are in satisfactory position, do not meddle. If reapposition is useless or impossible,

do not meddle. If fracture is incomplete and alignment protects against subsequent deformity, do not meddle. Manipulations to obtain reapposition are least harmful when conducted under visual control furnished by fluoroscopy. Fair apposition obtained immediately by closed manipulations or presently by traction is usually preferable to more exact open reapposition. If open methods must be employed, the earlier the better, other conditions duly considered.

4. The less fixation and support employed beyond the requirements for safety, the more perfect the repair. Many impacted fragments and some well-apposed non-impacted fragments require no fixation, and, exceptionally, may require no support. Fragments that can be neither reapposed nor fixed need only temporary support to restrict pain and to avoid further injury while active motion is being instituted. Fragments that can be reapposed but not fixed by external means may require internal fixation. Internal fixation causing the least irritation is preferable; artificial impaction; iso-bone grafts or foreign bodies are available means. Absorbable foreign bodies are not invariably preferable to the less irritating non-absorbable foreign bodies or to those physically more dependable. Usually the more dangerous foreign bodies should be removed soon after they cease to be effective in providing fixation. Nails, pegs, and screws loosen as contiguous bone atrophies, which occurs sooner if motion is prevented and the entire bone becomes atrophic.

5. When safety permits, immobilization should be avoided. Unavoidable immobilization should be interrupted at early intervals partly by passive, and partly by increasing active, motions. Plaster casts are undesirable unless they permit of earlier active motion than other apparatus since they exclude the beneficence of sunlight. Calipers, splints and frames can often be employed with less discomfort and so as to allow earlier active motion, particularly of joints.

6. Collateral measures. Diet, mas-

sage, manipulations, heat, light, placing patients in the open air, blood transfusions, physiotherapy—indeed, everything that will hasten repair and satisfy exactions of patients and friends is desirable.

Treatment of fractures, so as to cooperate with nature's methods of healing is the one way to obtain better results.

Active motion is a constant factor in recovery and no recovery is complete until unrestricted active motion is possible.

The earlier active motion is instituted the more prompt and complete are recoveries, provided a development of deformities is prevented during the healing process.

Methods of treating fractures should be designed to interfere the least with general activities and to permit the earliest resumption of active motion by the structures involved in the injury.

—Yates, J. L., Stevens, G. W., *Active Motion in The Treatment of Fractures. Annals of Surgery, 1925, Vol. LXXXII, 617.*

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

Benjamin Franklin, Medicine Man

Annals of Clinical Medicine for January, 1925, carries an interesting and an informative article by Dr. Stewart Roberts of Atlanta about Benjamin Franklin, in which he gives particular attention to Franklin's interest in medicine and his knowledge of that science.

Franklin was enormously precocious. He attended school scarcely at all, yet he must have become one of the highly-educated men of the Colonies. He could not remember having ever been unable to read, and when scarcely more than a child, he had studied and apparently mastered many philosophical volumes that we still regard as classics, but fit only for the educated adult mind.

When yet a young man Franklin was the outstanding editor and publisher of the day, and when only forty-two years of age his business career had been so successful financially that he was able to retire. With no instructor save himself he had become able to speak and to

read practically all the much-used languages of his day. He held legislative office; he helped to write the Declaration of Independence; he helped to formulate the Federal Constitution; he was a diplomat and the first Postmaster General of the United States.

Franklin's interest in medicine probably resulted from an extension of his studies in the natural sciences. He perfected plans for lighting, paving, and keeping clean the city of Philadelphia. He contended that exposure had nothing to do with the causation of colds, but he regarded such conditions as attributable directly to infection of one person by another. He stressed the importance of the proper ventilation of houses. The British government sought his advice about the ventilation of the House of Commons. Franklin was probably the first person in the world to make use of electricity for therapeutic purposes. He made the first flexible catheter; he invented the bifocal lens; he devised the first stove. He noted the effect of exercise on the pulse-rate, respiration, and body heat. He understood the use of cinchona bark in preventing malaria; he published an article on gout, from which he suffered. He advocated the practice of vaccination as an anti-small-pox measure; his correspondence reveals sound knowledge of the value of proper infant feeding; he knew a good deal about measles, rheumatism, bladder stone, paralysis, yellow fever, and he observed the wrist drop in chronic lead poisoning.

Franklin was practically the founder of the University of Pennsylvania, and he and Dr. Thomas Bond established the Pennsylvania Hospital. He made himself conversant with the best medical literature of his day; he had a large circle of medical friends in America and throughout Europe. His medical counsel was frequently sought. He was instrumental in persuading Dr. Benjamin Rush to complete his medical studies in Paris. He was elected a member of the Royal Society in England, the Royal Medical Society of London, and the Royal Medical Society of Paris. Franklin held no medical degree, but, in spite of

that fact, he must have been one of the outstanding physicians of that day.

In 1790, at the age of eighty-four, he died. To the disintegrating effect of old age was added the acute disturbance of a pulmonary abscess, and the aggravation of a stone in the bladder. The use of laudanum made his last days more tolerable.

Roberts says: "He was ever with inquiring mind seeking some new thing and the truth that shall make us all free. He exalted labor, dignified knowledge, aided education, encouraged youth, emphasized thrift, exemplified friendship, made of common sense an art, of science an application, of simplicity a virtue, of time an opportunity, of self-denial a delight, and of character a habit. He was toiler, student, printer, patriot, inventor, soldier, traveler, journalist, author, diplomat, statesman, scientist, patron of medicine, and friend, a benign and persuasive figure, and a master workman of the young Republic."

Franklin thought his own thoughts, formulated his own creeds, lived his own life, and left a profound impress upon all with whom he made contact in person or through his pen. His spirit roams the continent and the world to-day. It would mean much to mankind today if we medical men could have somewhat of his open-mindedness, his keen powers of observation, his refusal to be anchored to the professional past, and the humility of his investigative mind. He would be a stimulating presence in a modern medical society meeting. But he might be called a quack or a charlatan.

UROLOGY

A. J. CROWELL, M.D., *Editor*
Charlotte

The Development of Gento-Urinary Surgery as a Specialty: Final Article.

During the last twenty-five years but little improvement has been made in handling bladder conditions. Bladder stone is removed now as then, by crushing and evacuating, or lithotomy, either supra-pubic or perineal. But little progress has been made during this time in the management of malignant condi-

tions of the bladder. The discovery of the favorable influence of radium and x-ray upon such growths offered great hopes in the beginning, but after the lapse of time, and the accumulation of cases sufficient to ascertain their real value, it is looked upon with less enthusiasm. In fact the plan of excision,—as advocated twenty-five years ago,—seems to offer as good results as anything yet found. The implantation of radium element or radium emanations through supra-pubic opening seems to be effective in some cases, just as fulguration and diathermy have been beneficial in others. In fact, experience has taught us that in the great majority of malignant conditions of the bladder about the only treatment is palliative, and, that the best method of obtaining this, taxes the judgment of the best of us. Death is inevitable in the great majority of cases. Modern appliances for bladder drainage, however, are simple and efficient.

Great progress has been made during this period in diagnosing pathological conditions of the bladder by means of the cystoscopy and by radiography. The cystoscope has been perfected, and, by means of ureteral catheterization and x-ray the diagnosis of pathological conditions of the ureters and bladder are made with great accuracy. In the beginning the catheterizing cystoscopes were very crude, and the x-ray machinery very inadequate, but to-day they are both practical and indispensable in urology and genito-urinary surgery.

The discovery of kidney infection was very easy after the development of the catheterizing cystoscope, but not until the x-ray was perfected were we able to ascertain definitely the presence of stone in the ureter or kidney.

The early diagnosis of malignant conditions of the bladder, ureter, or kidney was impossible before cystoscopy and radiography came into combined use. By means of these with the differential phthalein and specific gravity tests, malignant conditions of the kidney are often diagnosed sufficiently early to perfect a cure by the removal of the organ.

The x-ray not only shows the presence, but size and location of kidney or ureteral stone. It is of great value in arriving at a conclusion as to how these should be handled. In fact, the location of kidney stone can be made so accurately that it is no longer necessary to split a kidney wide open to find and remove a stone, but the surgeon is enabled to open the kidney pelvis and remove the stone, (though it be located in one of the calyces) with great accuracy and with but little trauma to the kidney.

The ureteral catheter has made it possible to relieve the most severe pain of kidney colic, in most cases with marvelous promptness. It has made it feasible to remove the majority of impacted ureteral stones through ureteral anesthesia and dilatation. In cases of kidney infection resulting from ureteral obstruction either intrinsic or extrinsic, the ureteral catheter has made drainage and lavage of the kidney pelvis possible.

These advances have placed urology in the fore-front of medical science, in so far as diagnostic accuracy is concerned. It has the drawback of causing many of us to rely too much on these instruments of precision and less on clinical data.

I have said nothing of the advancement made by the pathologist in urology. Twenty-five years ago there was nothing known of the Wassermann reaction or blood chemistry to ascertain blood nitrogen retention. Neither, were we taking advantage of complete blood examinations as we do to-day in our kidney work.

I have simply given a brief of the progress made in urology since I came upon the scene. Of course, volumes have been and could be written on this subject, but I have not the inclination to take up the subject more specifically, neither would I request the space necessary for anything more than a brief. In concluding this series of papers I wish to express my appreciation of the tender of the pages of the Journal for recording somewhat of the wonderful development of my own specialty in my own time.

DENTISTRY

W. M. ROBEY, D.D.S., *Editor*
Charlotte

Benefits of Society Affiliations.

Following the rule of the human race in general, the benefits of participation in the work of dental societies are valued most by the most capable. The man who is busiest, and whose time sells at the highest figure, is usually the one who most willingly and regularly attends the various meetings and takes a leading part in their activities.

Those who, after having become members of the various organizations made up of their professional brethren, become discontented and drop out, are usually those who have counted on obtaining benefit without putting forth any effort for the general good of the whole body. Frequently these develop into grouches who spend much of their necessarily great amount of spare time in complaining of the senselessness of attending society meetings.

In a recent expression in "The Bulletin of the North Carolina Dental Society," Dr. Arthur Haynes Fleming discusses this tendency quite pertinently. In his opinion those willing to put in something for what they take out soon find that they can take out more than they put in. They gain through the interchange of ideas, through the experience of those who have devoted a great deal of time and study to special features, through the stimuli to better and better work and through the confidence of their conferees in their ability and eagerness to develop.

All these things are of vast importance, but possibly it is in another way, to which attention is called, that even more good is accomplished; namely, through learning to know of what good other members are capable, and thus appreciating the admirable qualities possessed by the great majority, rather than to be almost obliged to base our estimates on the often twisted reports of disgruntled patients.

The Use of Dyes and Mercury Compounds Intravenously in the Treatment of Infections

Much has been written both for and against the intravenous use of dyes, especially mercurochrome, in various infections usually septicemias. In fact many have come to use this more or less dangerous drug indiscriminately. Reports from the clinics at Johns Hopkins are almost invariably favorable in regard to its use. Reports from New York hospitals, chiefly from Bellevue, condemn its use and support this view with autopsy reports on cases in which this drug was used.

In determining experimentally the value of any chemical in intravenous therapy many factors have to be taken into consideration.

In the first place a drug may be very highly bactericidal in the test tube but of no value whatever when placed in the blood stream of a living animal. Many drugs lost their bactericidal or bacteriostatic power when mixed with the blood serum or other protein.

When a given drug is tried out on animals other factors come into play. First, an animal may be much less susceptible to a given infection than is the case with a human being.

Second, an animal may be much more susceptible than a human. Third, it is very difficult to so regulate the dose of an infective organism that the animal will always succumb to the infection, but will, on the other hand, live for a sufficient length of time to give the drug under investigation a fair chance to demonstrate its efficacy of lack of efficacy.

Every one knows the value of intravenous therapy in the case of some of the protozoal infections, such as malaria and syphilis. Unfortunately a like success has not been attained in bacterial infections.

At the present time the two most widely used substances in bacterial infections are gentian violet and mercurochrome.

Some remarkable results have been observed after the use of each of these dyes. On the other hand, if all the cases

in which these dyes have been used with negative results were to be recorded they would outnumber the cases in which favorable results have been obtained. No reports have been made on the harmful results following the use of gentian violet and so far as is known the use of this dye intravenously is without such effects. In view of the report of Norris from Bellevue Hospital on the cases which came to autopsy in that institution after the use of mercurochrome, it would seem advisable to go a bit slowly on the use of this drug. In Norris' cases he was able to demonstrate injuries to the liver and kidney which he attributes to mercurochrome. One should be slow to accept or to condemn the use of any drug, especially for intravenous use until it has been shown that it not only will do good but also that it does not do harm.

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PEDIATRICS

FRANK HOWARD RICHARDSON, M.D., *Editor*
Brooklyn, N. Y. and Black Mountain, N. C.

Rational Rearing of Children.

We read and hear much these days about better feeding, better clothing, better schools, better teachers, and better physical care of our children in all directions. These cannot possibly be overstressed; and they are coming, slowly but surely. It takes community action, however, to get them; and that moves slowly. There is another improvement that is even more sadly needed; and that does not wait upon community effort. Every one of us (or every two of us, to be exact) can accomplish it, if we will. This imperative need, modern medical and social science tells us, is the improvement of the individual home,—and this waits upon nobody's action, except that of the father and mother that is, of you and me.

And by "improvement" is meant no vague, dreamy uplift idea. It is as clear and cleancut a diagnosis and prescription as that of the efficiency engineer, called in to diagnose and treat a failing business, when he says that there must be an improvement in method, if the business is to survive.

But why is the home so important in the education of the child? We pay taxes for schools to train our children; why should we bother to do it ourselves? We send our children to school at six: couldn't begin training them much earlier than that, could we? Haven't wasted much time, have we? No, not much. There has been a waste of not more than six years, out of a possible six, to be exact! And these first six years are the most vital of all, educationally; for in these years are formed the main "character trends." When they have become "set" or solidified in their permanent molds the time for radically changing them has gone by forever. Nonsense? Perhaps it is; at least it is one of the few things that doctors, psychologists, teachers, and all the rest who have to do with children are practically all agreed upon.

Another reason for the importance of the influence of the home as compar-

ed with that of the school, is the comparative time exerted by the two. Five hours at most for the school; what shall we do with the remaining nineteen out of the day's twenty-four? Even after he has slept and eaten,—and these he does in the home, by the way,—we still have a vast balance of time on the home side of the ledger. What are we doing with it?

Another reason for the overwhelming influence of the home upon the child, is the fact that there are so few persons there,—which means that the influence exerted by each one of them for these long hours spent in the home must be enormous in proportion to that exerted by any others. All these members are teachers,—far more potent than the teachers that begin to function in school—after the age of six, because of the leverage exerted during these early years.

What then shall the home be, or do, or have? Physical comforts? Yes, of course. Children should be healthy, comfortable, and therefore happy. But the "therefore happy" does not necessarily follow as a matter of course. How about your own home, at the end of a rainy afternoon? What must we have, in addition to good hygiene?

First of all, if we have such a realization of the importance of influence and suggestion, the home can no longer be considered a place in which to "let down and be natural,"—if "being natural" means being hasty and unguarded in speech, careless in dress, slouchy in posture. Why give our best to the outside world, for which we care so much less than we do for our own, if we are not to give them the same high quality of living? Nor can hasty speech, short temper, and curt commands find a place at the table or in the living room,—unless we are willing to see their inevitable reproduction in the lives and habits of our children.

Is all this worth while; and if so, can we get it without putting forth more effort than the result is worth? It is encouraging to remember that the "relief" that the hasty impulsive word or the slouchy relaxed posture seems to

give us, is much more apparent than real. It is really but the making of more trouble, in the disagreeable response that it brings out: whereas not only is self-control stimulating in itself, but it evokes a far more pleasing response on the part of all of those around us.

If it is worth while, how shall we go about getting it? First, there must be a definite schedule of home living established, to which the children must become accustomed. The exception is so easy to make,—and so woefully hard to stop making! And rules, though they seem a nuisance, are readily followed by children, when once they are established.

Meals, particularly, can be made to follow a very definite formula, from which the children themselves will not allow one another to deviate without strict accounting. The washing of faces and hands before meals; the waiting until all are assembled before sitting down; the saying of grace in rotation; the placing of a chair for mother, a privilege to be exercised in turn; all can be made the parts of a fascinating game, if approached in the spirit not of performing a duty, but of playing, exercising the rights of membership in the family "club" or "gang." Nothing is so helpful in eliminating the customary mealtime bickerings, as the provision of a definite topic of conversation. One family of quite young children has a rule that each shall bring to the table some story, short poem, or interesting experience as his contribution. Another great aid is the elimination of all "don'ts" at the table; all comments made being of a favorable nature, for things done well, while mistakes go unnoticed.

Probably few grown-ups have ever stopped to realize that the average home has almost nothing that was made for children, is really accessible for children, or is suitable in size and form for children. There is no room in which they can really play, unhampered by fear of the other tenants or the landlord's comments if they indulge in any of the freer movements needed for the exercise of

the large muscles. Work table, drawers and shelves for tools, paints, materials, and uncompleted work, to which may go without asking either help or permission of adults,—these are rare, rather than usual. Liberty to do implies not only permission, but facilities as well.

"How impractical," someone may say. How can we get all this?" I have seen one corner of a room in a boarding house transformed by the provision of a little soap-box table, book shelves and drawers, and given over to the exclusive use of the children. I have seen a family living-room transformed into a play- and work-room for the children; and the family was really a fairly respectable one, too! How did they entertain guests? They had to weigh the hospitality requirements of their friends and acquaintances for an hour or two once a week, against the work and play requirements of their children for several hours a day. And they realized, selfishly perhaps, that fulfilling those requirements of their children now, would be bringing in dividends of the greatest value to them at a time when their friends could not give them nearly so great a return. And of course the kind of friends that folks of that sort have, thought none the less of them when they were entertained in a room in which the well ordered and workmanlike carpenter's bench, the broad shelves stacked with specimens of work well done or workmanly begun, and bookcases stacked with the familiar volumes beloved of childhood, had replaced the Windsor chairs, the grandfather's clock, and the tip-and-turn table of mahogany and black oak that had once been their chief treasures.

You remember the response of the old gentleman in refusing to give anything to a beggar, who could not change a five-dollar bill,—"it is necessary to have some capital, even to be a beggar!" And it is necessary to have some ingenuity, some imagination, and above all some real desire to create an environment that will let a child grow and develop,—even for the unskilled occupation of being a parent.

REVIEW OF RECENT BOOKS

HEADACHE, ITS CAUSES AND TREATMENT, by Dr. Thomas F. Reilly, Sometime Prof. of Medicine, Fordham University, Attending Physician Bellevue and Allied Hospitals, Fordham Division, and at St. Vincents Hospital. \$3.00. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street.

The tremendous suffering caused by headache, the multiplicity of its causes and the great variety in the modes of treatment necessary for its relief make it a subject demanding attention from every man in medicine.

The widely-varying estimates of men in different specialties of the proportion of all headaches caused by disease of various organs are significant.

The attempt is made to associate aches in different regions of the head with disease of different organs of the body.

Detailed methods of treatment are recorded.

EARS AND THE MAN, Studies in Social Work for the Deafened by Annetta W. Peck, Estelle E. Samuelson and Ann Lehman, with an Introduction by Wendell C. Phillips, M.D., President-Elect of the American Medical Association. \$2.00. Philadelphia, F. A. Davis Company, Publishers, 1926.

This treatise is said to "represent the gathered opinion of fourteen years of shared experience in a new phase of social work." The avowed "purpose is to increase . . . a helpful interchange of work between the otologists, the educators and the various forms of social service for the deafened."

An idea of its scope may be gained from its chapter headings: Deafness realized: what next?, Ears and the Mind, Ears helped by Eyes, Ears and Hearing Aids, Ears and the Job, Ears and Play, Ears and Education, Living in a Hearing World with Deafened Ears, and Lives Rebuilt.

Doubtless the serious study of these problems will add much to human happiness,—which is the only worth-while object.

CLINICAL THERAPEUTICS I. Therapeutic Agents. **II.** Therapeutic Procedures. **III.** The Treatment of Symptoms. **IV.** The Treatment of Diseases, by Alfred Martinet, M.D., Paris, France. With the Collaboration of Drs.

Desfosses, G. Laurens, Leon Meunier, Lomon, Lutier, Martingay, Mougeot, Saint-Cene, Segard, and Terson. Authorized English Translation from the Second Revised and Enlarged Edition, by Louis T. deM. Sajous, B.S., M.D., Associate Professor of Experimental Pharmacology, School of Medicine, Temple University; Instructor in Endocrinology, Graduate Medical School, University of Pennsylvania, Philadelphia. With 332 Text Engravings. Complete in two royal octavo volumes. \$16.00. Philadelphia, F. A. Davis Company, Publishers, 1925.

This is a work conceived and executed with *serviceability* in mind. It is arranged after an unusual plan, so that desired information may be found with the least possible expenditure of effort and time.

It steers a middle course between the polypharmacy of a few decades ago and the therapeutic nihilism of our own time. It represents largely the personal experiences of the authors.

Its recommendations are usually vigorously made, there being little of the "may be used" or "has been recommended" habit which detracts so greatly from the value of many modern treatises on therapeutics. At times it frankly advises a measure on the wise ground that there is a fair chance of benefit and none of doing harm.

Only drugs in current use are considered worthy of place here, and it is stated that only about twenty drugs need be thoroughly learned. It is a pleasure to find many kind words said for the good, old, reliable, seldom-used chloral hydrate.

A section tells when and why digitalis should be given and another does the same for cathartics, substituting a "how" for a "why." Dietetics, hydrotherapy, climatic treatment, exercising, electrotherapy, and the use of x-ray and radium are given space. Such now uncommon means as blistering, cupping, scarification, poulticing and the use of Southey's tubes are described.

The sitting posture is recommended for lumbar puncture.

Volume II deals with the treatment of Symptoms (Part III) and Diseases

(Part IV). Treatment of symptoms is advised for promoting comfort and in those cases in which the cause is either undiscoverable or irremovable.

The arrangement is admirable throughout. Scientific treatment is taught, but the relief of symptoms which distress the patient is regarded as in itself worthy of the pains-taking labors of the medical attendant. New remedies are welcomed, but only when they prove their superiority over old ones.

The work is helpful; and its hopefulness may be illustrated by its quotation from Claude Bernard, "Man is capable of more than he knows."

THE PRINCIPLES AND PRACTICE OF ENDOCRINE MEDICINE, by William Nathaniel Berkeley, Ph.D., M.D., Recently Attending Physician at the Good Samaritan Dispensary, New York; and one time Director of the Laboratory of Experimental Medicine, Cornell University Medical College. Illustrated with 56 Engravings and 4 colored plates. \$4.50. Lea & Febiger, Philadelphia and New York. 1926.

The importance and limitations of this subject demand that doctors obtain their information on the endocrines from astute clinicians, interested solely in the truth, and not from purveyors of gland products whose interests are primarily those of a merchant.

This book "defines the actual scientific status of endocrinology today, and contradicts at least a few of the old wives' fables now told not only in popular, but in pseudoscientific literature as well."

General principles and their special application are given rational consideration. The definition of terms is a valuable feature. A background for a discussion of the glands of internal secretion is afforded by mention of the glands of external secretion.

Basal metabolism methods calculations and valuations take up a short chapter. The anatomy, physiology and pathology of the different glands are gone into. The great difficulty in obtaining active preparations of constant potency is emphasized and much helpful information along this line is given.

The efficacy of parathyroid in certain cases of tetany and paralysis agitans is attested. In the dealing with substitution therapy of suprarenal preparations a note of some hopefulness is struck. Insulin is given its meed of praise.

Freudism is treated with scant courtesy. Sex relations are discussed in a wholesome, reasonable way. Steinach's claims are mentioned, but not endorsed. Of ovarian extracts it is said they may be of definite utility in certain selected cases.

"In one very thin young married woman in my care, it turned out in six weeks that the 'brilliant' results of pineal medication were probably due only to coincident conception."

Thymus and some others "have been used" or "are loudly advocated in certain commercial circulars."

The last three chapters that of the relation of these glands to one another,

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of clinical forms of pluriglandular disease and gland-grafting, and of endocrine influences on growth, in old age and in obesity. Apparently the "grafts" have been successful almost wholly as we regard the word in its slangy sense.

This book is a recital largely of personal experience and sane deductions. It is well worth study for its literary value. It should be in the hands of every practitioner of medicine,—and often.

ABDOMINAL OPERATIONS. By Sir Berkeley Moynihan, K.C.M.G., C.B., Leeds, England. Fourth edition, entirely reset and enlarged. Two octavo volumes totaling 1217 pages, with 470 illustrations, 10 in colors. Philadelphia and London: W. B. Saunders Company, 1926. Cloth, \$20.00 net.

Attention is directed in the preface to the fact that "surgery today is being practiced by too many light-hearted and incompetent surgeons, who have neither sought in due service to acquire a mastery of their craft, nor have learned from the experience gained by long association in hospital work when the operation should be done, when left undone, how made safe, how made to fall lightly upon a patient already afflicted, it may be, by mental no less than by physical distress."

Remarks upon preparation, conduct of operation and after-treatment of the patient are of especial interest. Washing of the hands of the surgeon "for not less than fifteen minutes" as a preliminary is a rather startling direction. "The most important person present at the operation is the patient. This is

a truth not everywhere and always remembered. It is our duty to make the operation as little disagreeable as possible for him." Brilliant illumination of the whole operating room is not only not conselled; it is denounced. Of drainage: "more irreparable mistakes can be made in avoiding drainage than in using it inappropriately."

The various operations, their indications, limitations and adaptations are clearly described and amply illustrated. Direct intestinal suturing is advised, buttons and such like appliances mentioned as of only historical interest. Illustrative cases add greatly in interest and instructiveness. The new edition of this authoritative work is worthy of the high rank achieved by its predecessors.

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(In response to a call, a temporary organization was effected at Virginia Beach, Va., August 31, 1898, with Dr. W. H. Cobb, President; Dr. Paulus A. Irving, Secretary, and Dr. H. H. Dodson, Treasurer.)

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1926

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THE READING OF A PAPER SHALL NOT
OCCUPY MORE THAN FIFTEEN MINUTES.

PROGRAM

Tuesday, February 16th, 9:30 A. M.

Place of Meeting

Prince Charles Hotel

The Association will be called to order by
Dr. T. M. West, President of The Cumberland
County Medical Society.

Invocation: Rev. J. S. Snyder, Pastor First
Baptist Church.

PAPERS AND DISCUSSIONS

Management of Prostatectomy", by Dr. R. L. Fayetteville, North Carolina.

"The Pre-Operative and Post-Operative
"Pyelitis with Special Reference to Diagno-
sis and Treatment", by Dr. Seavy Highsmith,
Pittman, Fayetteville, North Carolina.

"Auto Nephrectomy, with Case Report", by
Dr. Charles O. DeLaney, Winston-Salem,
North Carolina.

"Prostatic Obstruction as seen by the Gen-
eral Surgeon", by Dr. E. S. Boice, Rocky
Mount, North Carolina.

"A Large Tumor in the Pelvis of an Adult
Man", by Dr. Robert C. Bryan, Richmond, Vir-
ginia.

"Renal Tumors in Children: With Special
Reference to the Diagnosis"—(Case Report)
(Lantern Slides), by Dr. Hamilton W. McKay,
Charlotte, North Carolina.

"The Symptom of Frequent Urination and
its Etiology", by Dr. A. J. Crowell, Charlotte,
North Carolina.

"A Plea for the Sexual Neurasthenic", by
Dr. L. T. Price. Richmond, Virginia.

1:00 P. M.—Luncheon

2:30 P. M.—Afternoon Session

"Contracted Pelves," by Dr. Ivan Procter,
Raleigh, North Carolina.

"The Accessory Duties of an Obstetrician",
by Dr. M. P. Rucker, Richmond, Virginia.

"Rectal Analgesia—In Labor", by Dr. G.
Bentley Byrd, Norfolk, Virginia.

"Is the Surgical Treatment of Ulcer of the
Stomach and Duodenum Satisfactory" by Dr.
Murat Willis, Richmond, Virginia.

"A Pregnancy Toxemia not of Renal Origin",
by Dr. William deB. MacNider, Chapel Hill,
North Carolina.

"Goiter", by Dr. H. S. Black, Spartanburg,
South Carolina.

"Survey of Modern Surgery of the Thyroid
Gland", by Dr. J. deJ. Pemberton, Mayo Clinic,
Rochester, Minnesota, (invited guest).

"The Roentgen Rays in the Diagnosis of
Diseases of the Gall Bladder", by Dr. Fred M.
Hodges, Richmond, Virginia.

"Esophageal Diverticulum" — (Lantern
Slides), by Dr. R. L. Payne, Norfolk, Virginia.

"Sensitization Diseases: An Evaluation of
the Results of Specific Treatment", by Dr.
Warren T. Vaughan, Richmond, Virginia.

6:00 P. M.—Dinner

8:00 P. M.—Evening Session

Auditorium Fayetteville High School

(The Public is Cordially Invited)

Invocation: Rev. J. H. Shore, Pastor Hay
Street Methodist Church.

Brief Address:

by Hon. Angus Wilton McLean, Governor of
North Carolina.

by Hon. Thomas G. McLeod, Governor of
South Carolina.

by General A. J. Bowley, Commander of
Fort Bragg.

President's Annual Address, by Dr. W.
Lowndes Peple, Richmond, Virginia.

"Rabies or Hydrophobia", by Dr. C. A. Shore, North Carolina State Board of Health, Raleigh, North Carolina.

"Doctors, Science, and Humanity"—(Illustrated by Moving Pictures), by Dr. Allan Craig, American College of Surgeons, Chicago, Illinois. (Invited guest).

Wednesday, February 17th, 9:30 A. M.

Morning Session

"The Surgical Treatment of Angina Pectoris"—(Lantern Slides), by Dr. C. C. Coleman and Dr. J. G. Lyerly, Richmond, Va.

"Tularemia with Report of a Case"—(Lantern Slides), by Dr. T. Dewey Davis, Richmond, Va.

"Quinidin in the Treatment of Certain Cardiac Disorders", by Dr. J. Morrison Hutcheson, Richmond, Va.

"Presentation of Orthopedic Cases", by Dr. Alonzo Myers, Charlotte, North Carolina.

"The Use of Glucose in Medicine and Surgery", by Dr. Garnett Nelson, Richmond, Va.

"The Use of Buried Radon (Radium Emanation) in the Treatment of Cancer", by Dr. Douglas P. Murphy, Rutherfordton, N. C.

"Some Causes of Mental and Nervous Disturbances", by Dr. M. L. Townsend, Raleigh, N. C.

"Growth Disturbances in the Epiphyses of Long Bones", by Dr. O. L. Miller, Charlotte, N. C.

"The Clinical Application of Deep Roentgen Therapy", by Dr. James W. Hunter, jr., Norfolk, Va.

"Haemophilia", by Dr. C. S. Lawrence, Winston-Salem, N. C.

1:00 P. M.—Luncheon

2:30 P. M.—Business Session

Election of Officers

"The Surgical Results in Cases of Pulmonary Tuberculosis", by Dr. F. S. Johns, Richmond, Virginia.

"Neurofibromata with Report of a Case"—(Lantern Slides), by Dr. Carrington Williams, Richmond, Virginia.

"Some Reminders on Digestion", by Dr. M. O. Burke, Richmond, Virginia.

"The Clinical Diagnosis of Extra-Dural Hemorrhage, Caused by Violence", by Dr. J. Allison Hodges, Richmond, Virginia.

"Importance of Periodical Examination of Women", by Dr. Southgate Leigh, Norfolk, Va.

"Functional Nervous Diseases", by Dr. W. C. Ashworth, Greensboro, N. C.

6:00 P. M.—Adjournment

Information

The Prince Charles Hotel will be official headquarters of the Association. All the papers save those of Wednesday evening will be read and discussed in the Ball Room of the Hotel. The discussion of the papers should be pertinent, clear, and concise. A copy of each paper read should be left with the secretary. All the papers presented and all the discussion will be published

from month to month in Southern Medicine and Surgery, the official organ of the Association. A copy of this journal should reach every member of the Association. Members who fail to get their copy should notify the secretary.

On Thursday afternoon at 2:30 the business session will be held. The president will be selected from the North Carolina membership; a vice-president from each of the Carolinas and Virginia, and a secretary-treasurer from any of the three states. Vacancies in the Council are filled by the Council.

In 1927 the Association will meet in South Carolina. Invitations for the meeting should be presented to the Executive Council at its meeting on Tuesday evening, the hour and the place of which will be announced.

A lantern and an operator will be available throughout the meeting for the use of those who wish to illustrate their papers by slides.

The members of the Cumberland County Medical Society and the medical officers of Fort Bragg will serve as the Entertainment Committee, of which Dr. Seavy Highsmith is chairman.

The golf course of the Fayetteville Country Club will be available for the use of the members of the Association and its invited guests.

Fort Bragg, the largest artillery range in the world, covering an area of 40,000 square miles, 9 miles from Fayetteville by hard surface road, should be visited by the members of the Association. The commanding officer, General A. J. Bowley, will extend the welcome to the doctors.

The former presidents of the Association will hold their usual reunion dinner in the Prince Charles Hotel on Tuesday evening.

The officers of the Association have induced the physicians of Fayetteville not to offer entertainment of any kind. The brief period of the meeting will be fully occupied by the program. Every member of the organization is expected to attend the meeting and to bring a neighboring physician with him. All physicians will be

welcome visitors at the various sessions.

The mother in the home is often the medium through which much medical science finds its personal application. Therefore, the wives of doctors are cordially invited to come to Fayetteville and to attend the sessions. Nurses, for the same reason, will also be given a hearty welcome.

The Tri-State Association is interested as an organization only in helping its members to become more efficient doctors to the end that the people may have better and better medical care.

For the first time in the history of the Association the membership will be addressed by the Governor of each of the Carolinas. Governor Byrd of Virginia has just been inducted into office, but if he finds it possible, he, also, will attend the medical meeting. The presence of these Chief Executives of great Southern States will be heartening to the membership. The application of modern medicine is playing a large part in the progress of the South—in health, in industry, in education, in the spiritual outlook of the people—and that fact will be emphasized by the three Governors.

General Bowley, the commanding officer of Fort Bragg, is engaged in fitting young men not only to carry on war in defense of their country when the necessity arises, but he is also the head of a great training school, operating under the auspices of the Federal Government, in which young men are taught the value of physical, mental, and moral health in their daily lives as well as in times of war.

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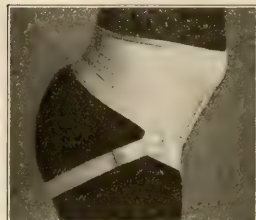
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*Your assistance in keeping this list revised to date, as well as in supplying medical news notes is greatly desired.—Ed.

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CHARLOTTE, N. C., MARCH, 1926

No. 3

J'ACCUSE LA GUERRE!

PRESIDENTIAL ADDRESS BEFORE THE 28TH ANNUAL MEETING OF THE TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

By W. LOWNDES PEPLE, M.D., Richmond

As president of the Tri-State Medical Association of the Carolinas and Virginia it is incumbent upon me to make you an address. It is one of my inescapable prerogatives. Custom and precedent further decree that this shall be upon some topic related at least to medicine, to this society in particular, or to our profession in general. This precedent I shall break, for I am going to talk to you about War.

But in this beautiful city so replete with history, so filled with the memories of two of our greatest struggles; this city so kindly in its hospitality that it changed its very name at the coming of a guest, the great Marquis de La Fayette, perhaps such a subject may not be wholly out of place.

Although but a few years have elapsed since the signing of the Armistice, untold volumes have been written about the Great World War. Every phase of it has been laid bare. Aided by the camera and the moving picture one has become familiar with every sordid horror of the trenches in garish detail. Medical men have contributed their full quota to these voluminous tomes and records; but they have written upon only two topics—disease and injury.

Never before was there such an opportunity for the mass study of these subjects. Never was there such a clinic in the history of the world. Men saw more rare and unusual cases in a month in war than would have come to them in peace in a whole professional life-

time. And once hostilities had begun never was there such a chance for the study of wounds and their treatment, for the first time with the help of all the facilities of modern science.

Now all these things have been done, thoroughly, painstakingly, comprehensively; and all the results and deductions have been set forth in journals, in pamphlets and in books. But what does the medical man, the army surgeon as he is called, think of War as a means of settling controversies that arise among nations? He had a wonderful opportunity back of the lines to see, to hear, to think and to draw conclusions. He saw things too from rather a queer angle: just a little different from other men in the fighting forces. Those of you who were not privileged to go overseas saw magnificent armies proudly marching into the grim hopper of War. What were the thoughts of those men who stood by the spout and saw the mangled product poured out after it had been crushed between the upper and the nether stones? I have not seen nor heard nor read just what they think.

I fear we medical men are tied to precedent and custom. There is a hesitancy, a timidity about approaching this and many other vital subjects from any standpoint except the professional. It is for this reason that we doctors have not taken you, the public, more fully into our confidence in the past. It is a fear lest we be misunderstood. We are just slaves to custom, bondsmen to precedent.

And yet at heart I cannot think that

our impressions of war, our views about peace, are matters of indifference to you. At any rate I shall take the chance of making a mistake. But first let me say, before I bring up the subjects of war or peace, that I am not a pacifist. Had I not gone to war, this paper could not have been written. Were I unwilling to go again, in a cause as just, the title of this paper would have been upon some good safe, substantial, regular topic, such as broken bones, dislocations, or appendicitis.

I believe that force is still necessary for the keeping of peace. Human nature has not yet risen high enough to make war unnecessary, much less impossible. We shall doubtless see more wars, bloodier, deadlier, ghastlier than those of the past. I therefore believe in trying any intelligent plan that offers a chance to eliminate some of them, even though it cannot abolish all of them. Nor, with such an end in view, would I hesitate or shrink from taking risks, or assuming responsibilities, heavy responsibilities.

There is much loose talk of avoiding entangling alliances. Was ever an alliance more entangling than the one into which we were most properly and fortunately drawn? We hear much of our boys being called upon to go overseas to fight the battles of foreigners. Are there such things these days as foreigners? No, they are just neighbors now! And even if the world were still the great big place it used to be, would it not be better and fairer to these boys of ours to send over a few thousands of them, to help stamp out the sparks of a beginning fire, than to wait again and then send over four millions of them when half the earth's surface is wrapped in a blazing holocaust of war?

The League of Nations is an agency conceived in honesty, and intelligently planned to reduce the number of wars. I would accept it all, the Covenant and all its articles, including the much debated Article X, "the very heart of the treaty." And, while I confess my faith, let me say I believe most devoutly in that great man, Woodrow Wilson, who

dedicated his life to this great plan for peace. Men have called him ambitious, have said that he was self-centered, seeking only personal glory under the guise of promoting a great philanthropic movement. Whatever were the motives that actuated him, the simple fact remains that he gave his life for a very simple, a very beautiful ideal; the safeguarding of the future of your children and of mine. Some have described his death as the bitter end of a disappointed and dispirited politician. Many have called him a martyr. One editor said of his death that it was as truly a battle casualty as though he had fallen in a charge upon the German trenches. How he would have welcomed such a simple end. How much easier it would have been than the tragic one that overtook him. I would rather say that he was the victim of the political jealousies and animosities of a "little group of wilful men" who thwarted, broke and then killed him.

But time has shown that the work was not well done. They slew only the body of the man. His soul arose triumphant from the dead in the little Swiss city of Locarno.

Some time ago I read a little pamphlet that had much to do with my presenting to you a subject that lies very close to my heart, and in doing so I am weaving into it a little "retrospect" following a post-war visit to France, which I presented to my comrades of Base Hospital 45 at one of their annual reunions. Since they were good enough to incorporate it into their history of that organization, I feel sure that the few who have heard it will bear with me when I present it to you. The pamphlet was by the Honorable Winston Spencer Churchill, England's First Lord of the Admiralty. It was entitled, "Shall We Commit Suicide?" It was a powerful plea for peace through the League of Nations, and it was all the more impressive because one knew he spoke at first hand.

He set forth some of the horrors of wars that are to come that fairly make one gasp; for future wars he says are to

be waged not against armies but against peoples; no man, no woman, no child, will be immune. He spoke of newer, deadlier agencies of destruction, the secrets of which lie waiting to broadcast famine and pestilence, to destroy a nation's livestock, to blight her crops, to wreck her very soil, that her fields may forever be a place of horror and of desolation. And this comes not from some idle romancer, but from one of England's foremost men, who has access to the innermost secrets of her War Office.

It impressed me deeply; but as I think of it, it seems to appeal only to one's reason. Now wars are not conceived in reason. If reason entered into them at all surely they would disappear.

It seemed to me then if one is to be listened to, he must strike the same chords which leaders play upon, whether falsely or truly, when wars are made. And what shall we call them; how shall we name them, those simpler things of the heart—patriotism, conscience, sentiment, if you will—that rise and pulse and throb and swell, and grow into a mighty flood that sweeps a nation off its feet and hurls it headlong into war? If we could only find those elusive chords and touch them ever so lightly, maybe men would listen and understand.

In such an appeal no longer would the costs of wars be reckoned in billions of dollars spent, or in vast properties destroyed, for such things time can mend. It would rather reckon war in terms of lost lives that can never be replaced, and maimed bodies that cannot be restored.

I have no argument. I make no intellectual appeal. I am just groping, trying to find a common ground of understanding, hoping to find and touch, and cause to vibrate, those simpler chords which will enable you to see with our eyes and hear with our ears—to feel as we feel who were there. And so, as I come to the title—I had almost said the text—of my little retrospect, I beg of you in all earnestness to listen to me only with your hearts.

"J'Accuse La Guerre!" I accuse War! I indict War! It was the last

day, November the 11th, 1919. The Second Army had gone over and was receiving its baptism of fire and blood. All the guns on our sector were roaring away as though war had just begun. It was the last hour, eleven o'clock! Would it happen? The guns ceased! Was this the end? It seemed as though the Earth should stop in its orbit. The greatest thing since the beginning of time had been accomplished. It was as though one had walked to the end of the world and looked over the border into measureless space. Could anything else ever matter? The War was over, finished! We had won!

Mechanically we went about our tasks of cleaning up, restoring order; our one thought by day, our one dream by night was home. So when on January 21st my orders came, and I bade good-bye to the little French city of Toul, where Base Hospital 45 had been so long, I thought that of all the places on the earth's surface this was the very last spot I ever wished to set eyes upon again.

But what a leveler is Time! How he smooths off the rough corners, fills in, and rounds out, until we would scarcely recognize the thing at all!

The hardships are forgotten; the mists of misunderstanding dissolve; the petty things disappear, and only the really big ones that count remain. The happier instances grow more vivid and remain to gladden and cheer us as the years go by.

And so after a year Toul, the aged city with its embattled walls and moat about it—Toul with its mountains, plains and river—Toul, the great strategic gateway of France, began pulling at me like a lodestone until finally this summer, after just four years, it drew me overseas again and claimed me utterly.

No troop trains this time; but with my wife and two dear friends I pulled into the station one Saturday in August, and, securing an aged *garçon* with a push-cart to trundle our baggage, we followed him afoot over the canal, up the street, over the drawbridge, under the

portcullis, and into Toul again.

How changed it is, and yet how unchanged! The same little news-stand; the same little shops—only all is now dull and dead—asleep.

Toul is essentially a military city and the soldiers of France are in the Ruhr; and now no boys in khaki swarm its time-worn streets.

I saw no familiar faces. The *Comedie*, where we stopped, has changed hands. The *Bosket* is not the same; "*Mamselle*" is not there. Kindly old "*Madame of the Lace Shop*" has gone to her reward.

But the sun was shining brightly, so after lunch we took the old familiar road to the barracks over the hill. By 45, by 53, on past 87, until we saw the long low outline of the old shooting gallery in the field beyond.

I was looking for English's grave, and memories of the day we buried him came back with poignant vividness.

The French cemetery to the right is there; neat, well-kept, with all its real and artificial flowers; with the little tri-colored rosettes upon its wooden crosses making a brave appearance in the sun. But on the left beside the old gallery there are only some long sunken trenches where our boys were buried. They have all been removed. Some have come home, others have gone to that beautiful resting place at Romagne which our government has provided.

On our way back we stopped and turned in the old familiar gateway of *Caserne LaMarche*. Past the guard house; on across the drill ground of the compound. How changed! The *triage* tents are gone; our wonderful *porte cochere* which we built over the recovery ward has vanished. They have even blotted out the huge cross in the compound that told the airmen to hold their bombs. The place is all but deserted, for only a half dozen men are left as care-takers; the rest are in the Ruhr.

I found a sergeant and in my best French I made him understand that this was my old home during the war, and then he was eager to take me everywhere.

We visited the rooms where we worked and ate and slept; clattered up the iron-ribbed stairs, through ward after ward. How familiar it all was, and yet how changed since Forty-five had its being there. The operating room has become an armory again, with gun-racks all down the center; but the wonderful picture of the kitchen is still there on the wall and the old fellow peeling the potatoes is still squinting to keep the cigarette smoke out of his eyes. As we went from building to building, from ward to corridor, many were the scenes that came crowding back upon my memory. At last we climbed to the top story of the central building and going to the window in its east end we looked out upon Toul, with the sunshine on the turrets of the old cathedral.

I saw the canal gleaming like a silver ribbon between green banks. I saw the valley of the Moselle. I saw the shoulder of Mount Saint Michael with its gun-crested heights, around which swept the road that leads to the old battle line before Saint Mihiel. I looked toward Nancy, toward Pont-a-Mousson and toward Verdun, and I thought of the glories of war.

Again the roads were choked with masses of moving men; the railroads blocked with troop trains. I saw long lines of the big blue *camions* of the French, the great spotted howitzers and siege guns, and then battery after battery there swung by the beloved *soixante quinze*. And then came our boys in khaki, light of step, lighter of heart; wave on wave they came, rising to a veritable flood. I saw France prostrate, devastated; her towns and villages but heaps of rubble; her fields laid waste, serried with maze of trench and network of tangled wire, pock-marked with shell holes, blighted with poisonous gas.

I saw her today with new villages, towns, and cities rising from the ashes of the old. I saw her wrecked fields leveled, bearing upon their bosoms once again great waving crops of yellow ripening grain.

I saw all France at work; blotting out, covering up, rebuilding, tilling the soil. And I thought of the blessings of peace.

And I wondered what it all meant? What was it for? What had been accomplished? How was such a stupendous thing, such a monstrous thing, allowed to happen? Was it really the premeditated act of a crazy king? Was it ambition, greed, lust of power of certain coteries of men about him that set in motion forces that broke bounds and could not be stayed nor stopped? Is there such a thing as a pressure of peoples culminating in social chaos, like the great cataclysms of nature, when room must be had by vast unknown forces, even though the very surface of the earth is rent and cracked and broken, blotting out nations or sinking countries into the sea? Are such things willed or fore-ordained? Are we really free agents? Or are we after all just puppets in one grand show; each nation, each individual playing his own allotted part as the Master directs, until the curtain is rung down? Why did we of Forty-five come overseas to witness and have part in such a horror? Was it really to help make the world safe for democracy? Have we done this thing? Is it safer? Have we ourselves gained morally or spiritually by such a sacrifice? In one fleeting instant I seemed to visualize it all—the whole scheme of war—clearly, intimately, even as one sees the littlest twigs of a tree by the lightning's flash—I saw it all!

I heard the shot at Sarajevo! saw the Prince fall. I heard the crackling of the message as it sped through the air over wire and under sea to the uttermost quarters of the globe. I saw the seething turmoil in the capitals, the hurrying of statesmen, the summoning of councils; saw the messengers go forth and the mobilizations begin.

Everywhere I saw armed men marching. I saw the mobilization of all the resources of all the nations of the earth; the financiers gathering gold, floating bonds, strengthening the sinews of war. I saw the windows of all the factories of the world aglow with light, their

chimneys belching forth black smoke, and men and women pouring in, to work. There was no night and no day. Guns and more guns—ammunition—fabrics—food! Shipyards sprang into being as if by magic and down the ways new fleets of vessels slipped into the sea. I saw such traffic by road and rail as has not been before; until great masses of goods, mountains of supplies, stood ready. And then the great movement began.

From every corner of the earth, men, guns, ammunition, food, supplies were being moved and concentrated along a ragged line that stretched from the English channel through Belgium and northern France to Switzerland. There were other lines in Russia, Italy, Serbia, and even in the Holy Land. But the great struggle for world mastery was here. Here the sum of all human hope and fear was concentrated. Here all the shipping of all the seven seas was pointed. I saw the great fleets of huge steel ships crowded to the guards with men, zig-zagging their way across the ocean. I saw the keen, trim destroyers—before, behind, on either side; watchful like shepherd dogs guarding their flocks; sleepless; tireless; alert. The fleets of England, France, and America on guard; the deadly U-boats fending them off. Overhead I heard the drone of hostile fleets, while the airmen fought and watched lest that ragged line should break.

Men spread huge nets of steel in the sea; laid barriers of sunken mines; marked and plotted the sea like the streets of a town and filled them with patrols. In the uttermost oceans fleet met fleet and battled to the end. Brave merchantmen fell prey to hidden foes that lurked beneath the waves, until the ocean's bottom became a veritable graveyard of sunken hulls. And this was all to hold or break that fateful ragged line.

Here men fought hand to hand with all the primeval instincts of the beasts; with all the subtle skill and cunning with which centuries of schooling have endowed them. They fought with all the hellish weapons of all the ages with

every engine and appliance known to art and science.

I saw men lying submerged in muck; wallowing in mud; impaled on sharpened stakes; wrapped and entangled in barbed wire; torn with shell fragments; raked with withering sheets of machine-gun bullets that drove like sleet across the open spaces. Locked in the ground, waist deep in polluted water—they charred one another with sheets of flame. The earth meanwhile was plowed and churned with shell and bomb; and now and again there drifted down the wind a deadly yellow pestilence of poisonous gas that burned and seared and choked and made men blind. Yet on they came, more and more men from either side into this hell, this ragged line that bent and swayed and stretched and broke and then reformed—always reformed.

The scene changed. I was looking down into our barrack yard. It was night! not a ray of light from anywhere. The yard was filled with litters, while the ambulances were ever bringing more and more. Over toward Saint Mihiel I heard the crash and roar of guns; saw their long continuous flash upon the sky line; and then looked down upon their dread product in the yard. I heard the measured shuffling tread of the litter-bearers. I saw the operating rooms; every table full; every team at work; caring for those silent, mutilated men; and I knew that this was just one little spot on one side of that ragged, bending line. I knew that for miles and miles on either side of it, other hospital yards were deluged with mangled men.

I knew that at every rail-head trains were ready, waiting to bear them away to give their beds to others that were to come. I knew that along that line on either side the graveyards were spreading—ever spreading. I saw them like great crimson blots of blood on the green bosom of Europe, and even as I watched they seemed to grow and grow, marking the mortal wounds in her breast beneath.

And then came day, and with it a lull

between battles. The sun shone beautifully, and I thought what a good place this world was to be in, after all. Suddenly I heard a piercing cry; and, looking down into the compound, I saw one of the French women who waited on our table. Her shawl was thrown about her head, and her sobbing fairly shook her poor frail body. Two others rushed out and threw arms about her and hurried her away. I knew what she had gotten. It was the message saying how her *Pierre* had given his life for France; how bravely he had fought; how valiantly he had died. The compound vanished, and I saw the mortal anguish of the women at the foot of the Cross.

I saw a titled lady of England receive the message in silence. I saw it come to a shrieking Yiddish woman on the Bowery, who raved and screamed and fought with those who tried to comfort her. I saw it come to a log cabin far up in the mountains of British Columbia, and I saw the passionate weeping of the mother. I saw it come to a sheep farm in Australia. She sat before the door of her humble home, carding wool and singing at her work. I saw her stiffen as the dull horror drove home, and I knew that she too had been crucified. I saw a black woman before her thatched hut in Africa, searing her breasts with live coals. I saw a woman in Indo-China—copper colored, slant-eyed—begging mercy of a strangely immobile idol, and I knew that the word had come to her. I saw an Indian scout riding across the plains of Idaho. I saw him come to a group of his people sitting about a fire in the center of their village, and give his message. I saw a woman leave the group in silence. Pulling her shawl more closely about her shoulders, she slowly went into her tepee. Black Otter had fought bravely for his country; had upheld the best traditions of his tribe; but he would return no more from France when the other braves came back to their people.

Oh, Mary! Mother of Christ! the extremity of suffering your sisters have endured!

Oh, God! Father of us all! the untold agony of it—this monstrous thing that has turned all Belgium's gardens into Gethsemanes and made of every hilltop in France a Calvary!

What does it mean? What is it for?

Is there really no other way?

Tell us! Give us a sign!

Can it be possible that this thing, this Armageddon, is the only way?

Oh, God! is War indeed the only price of Peace?

WHAT HAVE YOU DONE FOR THIS SOCIETY AND WHAT HAS THIS SOCIETY DONE FOR YOU?*

J. C. GREENE, M.D., Greenville

My friends, I deem the above caption a fitting one at this time, as we have just entered a new year and it is good business to inventory what we have. If after investigation we find that this organization has been worth while, it behooves us as its members to renew our allegiance and strengthen our endeavor for bigger and better things in the future.

It has been my pleasure and privilege to belong to this Society since 1914, and I have found it ever of abiding help and inspiration, full of sense and sentiment.

In defining a Medical Society, I should say it is a body of doctors banded together for the good of the profession, for social intercourse and for harmony and better understanding of each of its members. I think our organization is one with a soul and that it has lived up to this definition and is still functioning smoothly with no place for a board of censors.

Our periodical coming together has

been for a common cause, has cemented our friendship and loyalty until there is no friction, envy, hatred or malice which I am sorry to say characterizes the profession in many communities. We have learned that "there is so much good in the worst of us and so much bad in the best of us, that it hardly behooves any of us to talk about the rest of us."

The scientific papers to which we have from time to time listened will compare favorably with those heard at larger gatherings where greater things are expected. These contributions have shown much study and research on the part of the member presenting them, and they have been a source of entertainment and education to those who listened, keeping us abreast of the times and ever alert for anything new that might be born in the field of medicine. The free discussion of these papers has in a large measure overcome the timidity of the individual and enabled him to think on his feet and express himself with clarity.

In conclusion I wish US and you a happy and prosperous New Year.

*Address to the Pitt County Medical Society, at Ayden, January 14th, 1926.

I have made all of the mistakes and have done all of the unnecessary operations which go with worthless appendix surgery but I hope during the next ten years in practice to do fewer of these—Robert T. Morris, in *Am. J. of Obs. & Gyn.*, Feb., 1926.

PYELITIS WITH SPECIAL REFERENCE TO DIAGNOSIS AND TREATMENT*

SEAVY HIGSMITH, M.D., Fayetteville

In this locality, and especially at this season of the year, when our climatic conditions vary so widely,—ranging from zero weather to warm sultry days, with rain, sleet and snow sandwiched between,—pyelitis is very frequently met with. It occurred to me that a brief review at this time might be worth while. Of course, we cannot directly attribute climatic conditions as a direct cause of pyelitis, but I do think it is an important factor.

It has been observed since the arrival of influenza, which came as an overwhelming epidemic in 1917 and which has been prevalent each season since, that the number of cases of pyelitis has been materially on the increase. The disease is classified among the surgical inflammations of the kidneys. It is microbic in origin and may be caused by any pyogenic bacterium. The organism most frequently found is the bacillus coli, which thrives best in acid urine.

It is my opinion that pyelitis is rarely ever primarily a disease in itself, but is rather a symptom or a complication of some other disease or focus of infection, as abscessed teeth, pyorrhea, infected tonsils or infection of the accessory sinuses. We might include gall bladder infections, acute and catarrhal appendicitis and constipation. It is frequently, if not always, accompanied by a nephritis.

In our study of microscopic reports of urine we may suspect pyelitis in every case of bacteriuria or pyuria that does not come from a urethritis.

ROUTES OF INVASION

According to the classification of Rovsing bacteria may reach the urinary tract by one of four routes:

1. From the urethra—ascending invasion;

2. From the kidney—descending invasion;

3. By irruption of a neighboring focus; and

4. By the circulation—indirect invasion: namely from open or infected wounds, etc.

PREDISPOSING CAUSES

1. Constipation;

2. Retention of urine either by stricture or large prostate;

3. Stone;

4. Tuberculosis or neoplasm;

5. Trauma;

6. Anything which lowers the power of resistance—a. pregnancy; b. septicemias; c. wasting disease, especially influenza and its complications.

Congestion of the kidney is regarded as an actual important factor in the production of renal infection. Slight torsion of the vascular pedicle or slight retention by kinking of the ureter, the trauma of slight bruises, wrenches, straining and lifting and toxic influences all lead to congestion of the kidney. Congestion is said to be more important than the type of bacterial invasion, for it is known that a normal kidney will excrete and destroy bacteria and that no infections result unless bacteria reaching the kidney are deposited in or upon congested tissue. About ninety per cent are caused by some of the pyogenic cocci. In this paper tuberculosis of the kidney and pyelitis accompanied by stones are not to be considered.

As it is our purpose to deal more particularly with diagnosis and treatment, we will not go fully into cause and pathology, but will call attention briefly to the period of life in which it is most frequently seen. Literature reports six cases in the newly born infant. Pyelitis in the newly born infant has generally been considered an uncommon disease and is probably more prevalent in female than in male infants.

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

Women are more subject to pyelitis than men. This can be explained by the peculiarity of the feminine body form, permitting greater mobility of the kidney and which subjects the kidney to many forms of internal and external trauma. Renal infection in the female may occur at any age, but there are certain periods of life in which the recurrent types are more apt to become activated; for instance, it occurs more commonly after marriage than before. The so-called "defloration" pyelitis occurs at this time. The trauma of repeated childbirth and the strain of heavy household work are factors leading to congestion and infection of the kidney. Elderly women too are prone to the chronic recurrent types which may remain dormant for months or even years until suddenly made active by some indiscretion or general lowering of vitality.

Attacks of pyelo-cystitis are not at all uncommon following pelvic and abdominal operations as well as confinements, especially if there is much trauma.

DIAGNOSIS

Diagnosis is preeminently essential for a favorable outcome from the patient's standpoint, and is by no means as simple as it might seem. In routine urinary analysis, if no blood, albumin, or casts are found, we have been inclined to rule out the kidney in summing up our total for diagnosis; whereas, a more diligent study of urine from ureter catheterized specimens might furnish the key to the situation. Pus may fail to show up in a voided or catheterized bladder specimen, although it is abundantly laked in one or both kidney pelvis whose outlets are temporarily blocked by debris. Until recently very few of these cases were correctly diagnosed. Even now numbers of patients referred to hospitals for abdominal or pelvic operations prove to have pyelitis. We do not say this disparagingly to the attending physician, but that a discussion of this fact may prove profitable.

A few days ago I was called in consul-

tation with a neighboring physician to see a man aged 59. For one week he had been having excruciating pain in his left side, giving a typical picture of kidney colic. An x-ray in which a splendid plate was made did not show a stone. The man was emaciated, breath foul, tongue coated; pyorrhea of the worst form was evident; teeth were decayed and in dreadful condition; temperature was 103 at time of consultation. Repeated urinalyses of voided specimens had been done on this case and no pus was observed. Cystoscopy was done for diagnosis. Right ureter normal in appearance; not catheterized. Left ureteral orifice inflamed and pouting. A number six catheter passed to the left kidney without difficulty. Specimen of urine obtained, muddy and stagnant in appearance. On microscopic examination it was found to be heavily loaded with pus cells. The left kidney pelvis was irrigated with one per cent mercurochrome solution. Here the left kidney pelvis and ureter were so inflamed and congested that the kidney was temporarily blocked.

As to physical and clinical signs, it is stated that seventy-five per cent of kidney infections present the typical symptoms of pain in the costo-vertebral space, radiating downward to the bladder, genitalia, or thigh. Thirty per cent may pass unobserved; in fact, a definite pyelitis may exist without any physical symptoms other than languor and malaise; or, to use the patient's expression, an "all in feeling" with loss of appetite, loss of weight, and disturbed digestion. When the ureter does not become blocked or inflamed, pyelitis gives little or no pain. Some tenderness can be found on palpation especially if pyelo-nephritis exists. Most cases of long standing result in cystitis of varying intensity with its usual chain of symptoms.

Pyelitis should be considered in all cases of fever of obscure origin in infancy and childhood, and the urine should be carefully examined.

Headache may be complained of in older children. Gastric disturbances,

such as vomiting and diarrhea may be present. The urine is usually turbid, but may be temporarily clear from unilateral infection and obstruction of the ureter on the infected side. While the prognosis is usually good, and the mortality low, violent cases in which the inflammation extends into the cortex of the kidney may prove fatal.

In the young adult married woman some extra strain, over-exertion, chill, cold, intestinal upset, menstrual irregularities or the like may be the only exciting cause. Frequently a history of some previous urinary disturbance occurring during childhood or youth, and not recognized or considered at that time may be obtained. A history of enuresis in childhood can often be used as a lead in your diagnosis. It is not unusual for urinary symptoms in the young to be considered lightly and ascribed as nervousness or gastro-intestinal disorders. The typical attack in young women comes on suddenly with symptoms of urinary disturbances. Frequency, burning and marked urgency with straining and tenesmus after the act of micturition, are the predominant symptoms. The presence of chill and fever are frequent, though not constant. When a chill does occur it is likely to be ascribed to malaria and the clinical picture is much like unto it. Pain in the region of the kidney frequently is absent in uncomplicated pyelitis.

In women of middle age we have to differentiate from nephroposis, ureteral stricture, kinks, angulations of the ureter, from cystocele pyosalpinx, pelvic tumors and from chronic infection of the abdominal viscera. We may also mention the close relationship of gall bladder disease and colitis to ureteral infection. A diagnosis of appendicitis is frequently made by good diagnosticians, when the real trouble is a right-sided pyelitis and ureteritis.

I have in mind a girl 19 years of age, previously healthy; operated on for gangrenous appendix in which drainage was necessary. We came near losing the patient who was almost overwhelmed by the two existing infections. The blad-

der function was lost, the urine was involuntary and loaded with pus cells; so marked was the abdominal distention that the bowels were pushed out through the drainage tract of the right rectus incision made for the appendectomy. She eventually recovered with a small fecal fistula which healed after a few months.

In elderly women the symptoms are less acute, the patient seeming to acquire a higher degree of tolerance for pain and urinary irregularities; also a certain immunity against the infected organism is established.

Pyelitis is more frequent in the female than in the male; however, the fact that renal and ureteral calculi frequently occur in the male would lead us to the belief that they are often the victims of pyelitis. Being a "stronger vessel" than the woman, he may continue his daily work and ask for no advice during a mild attack. If a cystitis develops or a stone formation brings on an attack of kidney colic, he calls for medical aid. It is recognized that the formation of kidney and ureteral stones are the sequence of infections, furnishing the nucleus for the stone. Ureteral strictures are the results of infection.

When the ureter becomes blocked we have the same symptoms of excruciating pain, nausea, and vomiting that are observed with "kidney colic" plus the additional symptom of chill and fever of varying degrees.

TREATMENT

The treatment of choice in young children is sodium citrate, sodium bicarbonate, or equal parts of each given with large quantities of water. The most important factor, second to a correct diagnosis, is proper irrigation of the urinary passages through an increased intake of water. This may be given by mouth, by rectum, by hypodermoclysis, intraperitoneally, or even by the intravenous method. It is almost impossible to make the urine sufficiently alkaline so that it inhibits the growth of the *b. coli*. The curative properties of the alkaline medication may be due to the diuretic effect.

As to the treatment and management of pyelitis, we have recently advanced materially in our methods, both surgical and medical. In infants and in children under the age of five we still rely on the medical line of treatment and in older children and adults the cystoscope has been an invaluable means, both of diagnosis and of treatment. The youngest patient in my group to be cystoscoped was aged 7. The question of whether to treat a case of acute pyelitis with cystoscope and irrigations of the kidney pelvis or whether to treat it medically and wait until the acute symptoms have subsided is still unsettled. I think here, each case should be a law unto itself. If there is a co-existing violent cystitis, I think it perhaps best to treat this medically with bladder irrigations until the acute symptoms of cystitis subside. I do not regard, however, a temperature of even a hyperpyrexia as a contra-indication for the use of the cystoscope. I have frequently seen cases with a temperature of one hundred and five immediately subside and temperature reach normal within a few hours after kidney catheterization and irrigation.

There is one point I wish to stress in the method of catheterizing ureters of pregnant women after the fourth month. I refer to the position of the patient on the table by using the modified Trendelenburg position,—patient on back, legs supported by Bierhoff's knee crutches, table tilted head downward to an angle of forty-five degrees. This allows the pregnant uterus to sink downward toward the diaphragm; consequently the ureters are straightened out, removing resistance to the catheters, and the enlarged uterus is moved out of the way of the beak of the instrument. This will go a long way toward simplifying the operation and preventing trauma.

I consider the solution of choice for irrigation of the kidney pelvis either a one to two per cent of freshly prepared silver nitrate solution, or one to two per cent solution of mercurochrome. For first irrigation begin with solution

of not over one per cent.

There are many other solutions used with varying degrees of success. I formerly used argyrol solution in varying strengths, but have discarded its use because of its clumping effect, causing attacks of kidney colic following its use. A normal salt solution is a good cleansing agent and has some astringent properties.

Neutral acriflavine strength 1-4000 or 1-6000 in normal salt solution is no doubt a valuable irrigating agent. I have not used it in this way. It is said to be an efficient germicide, non-irritating and of low toxicity to living tissue. It has been given intravenously with good results in septic cases, including pyelonephrosis. I have given it by mouth with splendid results as a urinary antiseptic in fifteen cases of pyelitis. It is given in doses of one-half to one grain, one hour after meals with a glass of water. The light yellow color is observed in the urine shortly after administration. In two cases the drug was not tolerated and nausea and vomiting occurred. It acts best in alkaline media and can be given to advantage along with the citrates and sodium bicarbonate.

Hexyl resorcinol ($C_6H_3(OH)_2C_6H_{13}$), given by mouth is coming to be considered a specific in all types of infection of the genito-urinary tract.

1. Hexyl resorcinol, a stable organic substance of known chemical constitution, is the most powerful germicide ever described as a non-toxic substance.

2. It is non-toxic by mouth and is administrable in repeated doses for indefinite periods. Prolonged administration of large repeated doses to animals and to man results in no injury to the kidney or irritation of the urinary tract. It retains its powerful bactericidal action in solution in human urine of any reaction and is excreted unchanged by the kidney after oral administration in sufficient concentration to impart active bactericidal properties to the urine.

3. It is highly probable that hexyl resorcinol exerts little if any influence on infections which have invaded the

parenchyma of the kidney. It is an internal urinary antiseptic. No internal renal antiseptic is known.

4. Urinary infections due to the usual gram-positive cocci ordinarily clear up promptly, completely and permanently with no other treatment than hexyl resorcinol by mouth.

The "basic" diet and careful regulation of the bowels are important. Advise such patients to eliminate from their diet, peppers, spices, pickles, rich salads and foods that are irritating to the urinary tract. Also instruct them as to bladder hygiene; next eliminate all primary foci of infection before your patient is discharged. Renal infections occurring secondary to gall bladder, appendiceal, pelvic, dental or tonsillar disease, or sinus infections will often spontaneously disappear following surgical treatment of these foci.

I have treated one hundred cases of pyelitis with uniformly satisfactory results by the methods outlined which in-

cludes cystoscopy with irrigation and combined medical treatment, and have had no mortality in this group. Only one, a pyo-nephrosis of the right kidney in a woman six and one-half months pregnant, came to open operation of the kidney with drainage. Kidney irrigations and the medical treatment failed to arrest the process. On the ninth day after entering the hospital the patient had been steadily growing worse; signs of beginning uremia as indicated by delirium, chills, fever, and abdominal distention; pus, albumin, and casts in the urine with poor kidney function. It was decided to operate and drain the right kidney. This was done under local anesthesia, supplemented by light general anesthesia. Incision was made down to, and through the kidney substance to the pelvis of the kidney. Small catheter drain was inserted. Pus drained freely from the kidney and patient eventually made a good recovery.

QUINIDIN IN THE TREATMENT OF CERTAIN CARDIAC DISORDERS*

J. MORRISON HUTCHESON, M.D., Richmond

Since its introduction into cardiac therapy as a remedy for auricular fibrillation, quinidin has been used chiefly in this disorder. In addition to considerable experimental work dealing with its effects and dangers there has accumulated a rather extensive literature covering the clinical use of the drug more particularly in fibrillation and flutter of the auricle and also in certain cases of paroxysmal auricular tachycardia and premature contractions.

That quinidin does affect the auricle causing fibrillation to be replaced by normal rhythm is generally accepted, and practically all reports of experience with the drug indicate that this change of rhythm is of some value. There is, however, considerable difference of opin-

ion regarding the indications, contraindications and dangers of quinidin as well as some uncertainty as to the permanent results to be obtained from its use. It seems therefore desirable and necessary that further experience be recorded and critically analyzed before any final judgment can be arrived at as to the true value of this drug in cardiac disease.

The general object of cardiac therapy is the maintenance of proper ventricular output, either by improving the quality of the ventricular contraction or by modifying or controlling the factors within or without the heart that increase the work of the ventricle or handicap it in its activities. When the auricles fibrillate, regardless of the underlying disease, the resulting disorder of rhythm and rate undoubtedly contributes its part toward producing cardiac

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breakdown, though when the ventricular muscle is not extensively diseased fibrillation is often tolerated over long periods.

Digitalis, the standby in fibrillation for many years, produces its beneficial effects by depressing conduction in the A-V bundle, thus reducing ventricular rate, and also by improving the tone of ventricular muscle. It does not influence the behavior of the auricle which continues to fibrillate as before.

Quinidin on the other hand, by its special effect on the auricle, abolishes fibrillation allowing normal impulses to pass from the sinoauricular node to the ventricle. To this extent its action is definitely in accord with accepted principles of cardiac therapy. The general effect of quinidin on heart muscle, however, has been shown to be depressant, so while improving the heart's rhythm it may at the same time, unlike digitalis, exert an unfavorable influence on ventricular tone.

It is impossible clinically to estimate the relative importance of disordered rhythm and atonic ventricular muscle in producing heart failure but the success or failure of quinidin therapy would seem to depend upon which of these factors predominates. Where the disordered rhythm is chiefly responsible for embarrassed heart action, the restoration of normal rhythm may show brilliant results, while in hearts failing from other causes the change of rhythm induced by quinidin brings little or no relief and the depressant action of the drug on the ventricle may be actually harmful.

The selection of proper cases for treatment with quinidin is therefore the most important question connected with its use. Patients in whom fibrillation has recently begun and whose compensation is good, or those in whom it occurs in paroxysms are ideal subjects. Where the auricles have fibrillated over long periods and where congestive heart failure is present the drug must be used with great care. If signs such as extreme tachycardia, increasing breathlessness, precordial dis-

tress or marked palpitation follow its use, they may be interpreted as evidence of depression, and quinidin had better be discontinued. Occasionally, however, even when signs of heart failure are evident, quinidin produces no unpleasant effect and the return to normal rhythm, if it can be attained, results in greatly enhanced cardiac efficiency.

My own experience with quinidin has extended over about three and a half years. The patients to whom I have given it for fibrillation have been kept under observation in the hospital and in most instances followed with electrocardiograms. Of thirty-nine consecutive patients with fibrillation I have selected thirteen for quinidin treatment and in eight normal rhythm has been restored. The result of restored rhythm was good in most cases and no ill effects were observed that could properly be attributed to the treatment.

In four of my cases fibrillation was of recent onset, compensation was good, and in all the results were excellent. When recurrences occurred they yielded promptly to smaller doses of the drug as illustrated by the following case:

Case 1: A minister, aged 69, was first seen in August, 1921, complaining of shortness of breath and swelling of feet. Examination showed heart slightly enlarged to left, rhythm normal, blood pressure 172/84, moist rales at lung bases. Admitted to Johnston-Willis Hospital where treatment by rest and digitalis resulted in rapid disappearance of symptoms. In Nov. 1923, he returned stating that his heart had been rapid and irregular for two weeks but there was no dyspnea or edema. Electrocardiogram at this time revealed auricular fibrillation with ventricular rate of 120. Quinidin was begun and on the second day after 27 grains had been taken the rhythm became normal. Quinidin was stopped, but on the return of the irregularity three days later it was resumed with prompt return of normal rhythm which continued until he left the hospital a week later. In the next year he had several returns of the

rapid heart action but these were readily controlled by two or three 3-grain doses of quinidin.

In nine cases fibrillation had been established for a variable length of time. In seven the compensation was good and in three of these normal rhythm was restored. In no one of the three has subsequent study been possible, but the immediate effect of quinidin is shown as follows:

Case 2: A druggist, aged 56, was admitted to the Johnston-Willis Hospital with a diagnosis of large indurated gastric ulcer and probable malignant degeneration. His heart was found to be rapid and grossly irregular, a condition that he stated had been present for several years and for which he had taken large amounts of digitalis without relief. Examination showed fibrillation without decompensation. On the third day of quinidin, after fifty-four grains had been taken, the rhythm became normal and remained so throughout his hospital course which included operation for gastric resection.

In two cases compensation was poor, a circumstance that ordinarily forbids quinidin, but, as digitalis failed to control the heart rate, quinidin was cautiously administered. In both cases normal rhythm was restored and in one the result was extremely satisfactory.

Case 3: A woman, aged 56, was admitted to the Johnston-Willis Hospital complaining of nervousness, palpitation, dyspnea and swelling of feet. Her heart had been rapid and irregular for about six months; she had been treated by rest; but this, in addition to thorough digitalization, had had little or no effect on her symptoms. Examination showed hyperthyroidism and auricular fibrillation, heart rate 160, pulse 130 with passive congestion of lungs, liver and extremities. Quinine hydrobromate was given grain thirty daily and a few days later quinidin. After twenty grains of the latter the pulse became regular with rate of 80 and a most striking improvement in the circulation followed. Thyroidectomy was done, and following this there was a return

of fibrillation which was abolished by quinidin in less than twenty-four hours. The rhythm has since remained normal.

My experience with quinidin in fibrillation resulting from thyrotoxicosis has not been great, but in the case just cited it appears to have been of value both in the preparation of the patient for operation and in the fibrillation that sometimes develops as a post-operative event. Fibrillation often ceases spontaneously after thyroidectomy, so the persistence of normal rhythm is not attributed to quinidin.

Case 4: The other case in which the use of quinidin was admittedly questionable was that of a woman, aged 50, seen in January, 1924, and diagnosed mitral and aortic insufficiency and auricular fibrillation. For two years she had suffered from extreme dyspnea and palpitation, had been confined to bed almost continuously and had taken digitalis constantly. She was admitted to the Johnston-Willis Hospital where, in spite of rest and digitalis up to the point of tolerance, her symptoms persisted, the heart rate remained rapid and there was a large pulse deficit. Quinidin was then given increasing the dose slowly and after twenty-seven grains had been taken the pulse quickened and became more nearly regular with diminishing pulse deficit. Electrocardiogram showed at this point an impure flutter with ventricular rate of 150. Another dose of nine grains of quinidin resulted in slow regular heart, the electrocardiogram revealing sinus rhythm with rate of seventy-two. The patient felt greatly relieved and the drug was discontinued, but after twenty-four hours fibrillation returned attended by the symptoms previously noted. Quinidin was resumed, but, as it was impossible to increase the dose without producing breathlessness and precordial distress, it was abandoned. It seems evident that in this case it was possible to abolish fibrillation with quinidin, but the amount of the drug necessary to maintain normal rhythm produced too great depression to permit its continued use.

I have also used quinidin in a few cases of paroxysmal auricular tachycardia and one case of frequent ventricular extrasystoles. The results have been more difficult to ascertain than with fibrillation, but I am sure that in these conditions quinidin is worthy of trial. In one case of paroxysmal auricular tachycardia quinidin appeared to be strikingly effective.

Case 5: A man of 34 complained of attacks of rapid heart action beginning and ending abruptly and lasting from a few minutes to several hours. He had been subject to these for years but at the time of his examination they were coming several times a day, and the heart rate of 160 or more with the attending discomfort had seriously interfered with his work. No cardiac defect being made out he was advised to take quinidin grains three thrice daily under supervision of his physician. This he did intermittently and when seen eight months later he stated that he had had only three short attacks and that these could be entirely prevented by using quinidin.

It has been my practice to give quinidin in doses of three grains, three times a day and increase the dose slowly or rapidly as circumstances indicated until the desired effect was obtained or until untoward symptoms required its withdrawal. I have seen no idiosyncrasy to the drug, though it has been reported by others; nor have I observed any harmful effects that could properly be attributed to it.

Much has been written about the danger of embolism after the restoration of normal rhythm by quinidin. I have seen two such accidents during fibrillation, but neither patient had had quinidin. The one death among my patients that could be in any way related

to quinidin therapy was in an elderly woman with hypertension, fibrillation and questionable compensation which had been greatly improved by rest and digitalis. Soon after the onset of normal rhythm from quinidin she suddenly developed a complete hemiplegia with coma and death. No autopsy could be obtained. The possibility of cerebral embolism was considered but the obvious arteriosclerosis with hypertension, the nature of the involvement and accompanying rise of blood pressure made spontaneous hemorrhage seem more likely.

It is my belief that the dangers of quinidin have been overemphasized, and that many of the disasters that have been reported as following its administration would have occurred as the result of the disease for which it was given. Like digitalis, quinidin is used in a class of patients whose mortality is high at best and such accidents as may occur during its administration are not necessarily connected with its use. Nevertheless, it must be remembered that quinidin is also like digitalis in its possibilities for harm and that constant care must be exercised if its good effects are to be obtained and its dangers avoided.

Quinidin is not a substitute for digitalis, but the two drugs may be used in conjunction. When this is necessary it is preferable to first obtain digitalis effect and then use quinidin. Neither is quinidin a remedy for heart failure or tachycardia or palpitation, though it may control one of the important causes of these conditions. Certainly the drug has a definite effect on the heart and, though its field is limited, it will, if carefully used, serve a useful purpose until some more effectual agent is found to take its place.



Statue of Crawford W. Long to be unveiled in Statuary Hall, Washington, in the current month.

CRAWFORD W. LONG, THE DISCOVERER OF ETHER ANESTHESIA*

J. W. LONG, M.D., F.A.C.S., Greensboro

"Write the things which thou hast seen and the things which are"

I was persuaded to discuss with you the story of Crawford W. Long because of two reasons. A few months ago Dr. William J. Mayo asked me to write a biography of Dr. Long for publication in Surgery, Gynecology and Obstetrics. Then, too, I am anxious to read into the archives of the North Carolina State Medical Society the history of the discovery of surgical anesthesia.

I have been especially interested in the subject for ten years. I have made quite a collection of books monograms, pamphlets, newspaper articles, photographs and letters loaned me by Dr. Long's daughters, also numerous authors have generously put their writings at my disposal. I shall quote freely from these sources, in some instances *verbatim et literatim* without marks. It is fortunate that we have such reliable data from which to draw, much of it being the record of eye-witnesses.

What I shall say is not in a controversial spirit, but with an earnest desire to do justice to every claimant for the discovery of surgical anesthesia. Only recently I wrote to my friend, Dr. J. Collins Warren, Boston, asking for data and photographs regarding Morton's use of ether as an anesthetic.

In order to give my subject its proper historical setting, which is necessary in estimating the comparative importance of the work of individual actors in one of the world's greatest epochs, we shall review briefly the history of surgical anesthesia from its inception.

Genesis 2-17: "And Jehovah God caused a deep sleep to fall upon the man, and he slept; and he took one of his ribs, and closed up the flesh instead thereof."

Ever since the Creator of the Universe threw Adam into a deep sleep, before excising a rib, men have striven to

discover some agent that would produce insensibility to the pain of a surgical operation. Indeed, ancient history is full of accounts of the use of various sleep producing agents; drugs taken by mouth, inunctions, incantations and strokings. Some of these remedies undoubtedly had considerable virtue and accomplished their purpose to a certain degree. Among the drugs were opium, mandragora, cannabis indica, henbane and alcohol. Certain it is that their use gave fruitful theme to the pens of poets and writers of prose. Tradition says Aphrodite to assuage her grief for the death of Adonis, threw herself upon a bed of lettuce.

Shakespeare makes Cleopatra to say—
"Give me to drink mandragora.

That I might sleep out this great time.
My Antony is away".—

Thomas Middleton, who lived from 1570 to 1627, wrote—

"I'll imitate the pities of old surgeons
To this lost limb, who, where they
show their art,
Cast one asleep, then cut the infected
part."

Du Bartas in 1544 said—

"Even as a surgeon, minding off to
cut
Some cureless limb, before in use he
put
His violent engines on the vicious
member,
Bringeth his patient in a senseless
slumber,
And griefless then (guided by use and
art)
To save the whole cuts off the infect-
ed part."

Four centuries before Du Bartas' time, Ugone Da Lucca, a Tuscan surgeon, born about the middle of the twelfth century, described the "somni-

*Read before the North Carolina State Medical Society, Pinehurst, April 27, 1925.

ferous sponge" which he used. It was prepared by boiling a new sponge with certain drugs and "let it be applied to the nostrils of him who is to be operated upon, until he has fallen asleep, and so let the surgery be performed."

The foregoing illustrations could be multiplied many times, but they will suffice to show that surgical anesthesia was known and practiced by the ancients.

It is generally believed that the word "anesthesia" was coined by that incomparable wit and scholar Dr. Oliver Wendell Holmes. But in Maherr's "Praelectiones," published in 1778, we find the word "Anaesthesia" with a good description of the condition.

A remarkable thing about the history of anesthesia is that while the ancients practiced it, and writers extolled its virtues and poets sang its praises; yet, by the time of the seventeenth century the custom, by whatever method, had passed into oblivion.

Physicians of the day and type of Thomas Vicary, Ambrose Pare, Wiseman, Sydenham, et al; men who contributed so much to the development of medicine and surgery, did not employ surgical anesthesia; because, forsooth, there was nothing of the kind known and accepted by the profession except narcotizing the patient with opium and strapping him down until he could not wiggle. It is true that in 1843 Elliotson wrote a book entitled, "Surgical Operations Performed in the Mesmeric State Without Pain," and Esdaile announced that he had performed over three hundred major operations in India upon patients rendered insensible by hypnotism. But, like all other ephemeral methods, psychic anesthesia had its brief day and prompt disappearance from the scene of action.

The pessimistic attitude of the profession is shown by what Velpeau said in 1839: "To escape pain in surgical operations is a chimera which we are not permitted to look for in our day." Brodie said in 1846, "Physicians and surgeons have been looking in vain from the days of Hippocrates (460 B.

C.) down to the present time for the means of allaying or preventing pain in surgery."

This may be accepted as a fair description of the conditions that obtained and the attitude of the medical profession at the time of the discovery of the anesthetic properties of nitrous oxide and sulphuric ether. Of course, it is a "twice-told tale" to say that in 1800 Sir Humphrey Davey announced "that inhalation of nitrous oxide produced insensibility and that it might probably be used to advantage during surgical operations."

In 1800, William Allen, a lecturer on chemistry, demonstrated in the presence of Sir Astley Cooper and others in Guy's Hospital, London, the phenomena of nitrous oxide inhalation, noting especially the loss of sensation of pain. While that famous surgeon had eyes, he did not see the wonderful secret that was revealed before him, and for which the profession had searched in vain since the beginning of time; and the world shuddered on under the agony of the surgeon's knife. Thirty-nine years later Pareira published in his *Materia Medica* that nitrous oxide would relax spasm, relieve pain and produce stupor. Other men said the same thing. Still no one visualized the application of its anesthetic properties to surgery until, on December 10, 1844, Horace W. Wells of Hartford, saw Dr. Colton, a wandering lecturer, render several persons unconscious by administering nitrous oxide to them. The next day Wells had Colton administer nitrous oxide to him while a brother dentist extracted one of Wells' sound molars. Following this experiment on himself, Wells and other Hartford dentists frequently used nitrous oxide successfully. In January, 1845, by permission of Dr. John C. Warren, Wells undertook to demonstrate his method to the Staff and students of the Massachusetts General Hospital. Unfortunately, he pushed the gas only to the stage of delirium and the anesthesia was a failure. Wells was hissed from the operating-room. Of course, he was discouraged. While he

continued to use nitrous oxide in his work as a dentist, he met with other failures. Brooding over his hard luck, he went insane and committed suicide at the untimely age of thirty-three. Certainly, the nitrous oxide enthusiasts owe Wells a great debt of gratitude for his discovery.

Ether sat upon the apothecaries' shelves for three hundred years before its chief virtue was discovered. Parker and Thomas Beddoes in 1797 announced that the inhalation of sulphuric ether would relax spasm and relieve pain. Numerous writers said as much. Several of them noticed that if pushed too far it would produce stupor. But it does not appear that any one coupled the insensibility produced by ether inhalation with a surgical operation; and the shrieks of pain continued to be heard from every operating-room the world over.

It was observed also, that ether would produce the same exhilarating effects that nitrous oxide did. Mitchell mentioned this in his chemistry in 1835, stating that it was common practice among the lads of Philadelphia to inhale ether for its exhilarating effects. Ether was employed for this purpose in other parts of America and in Europe as well. Prof. Thompson, of Edinburg, entertained his students in the first half of the nineteenth century by having them inhale nitrous oxide or ether.

At this stage of my story it is opportune to introduce two other prominent characters whose names will always be associated with the discovery of ether anesthesia.

Charles Thomas Jackson was a learned physician and distinguished scientist. He was graduated from Harvard Medical School in 1829, studied in Paris three years, and dissected 200 cholera victims in Vienna. He practiced medicine in Boston and later gave up medicine for chemistry, mineralogy and geology, in which lines he became very eminent, receiving many honors from numerous states, and scientific bodies. In 1837 he disputed with Morse, claiming the invention of the

telegraph. Jackson became insane and died in 1880, after having been incarcerated for seven years.

William Thomas Green Morton was graduated from the Baltimore School of Dental Surgery in 1842 and began the successful practice of dentistry in Boston in partnership with Horace W. Wells, whom we have mentioned. In 1844 he began studying medicine with Dr. Charles Thomas Jackson in Boston, he and his bride living in the home of Jackson. In November of that year he matriculated in the Harvard Medical School, but he did not complete the course, his studies being interrupted by his interest in surgical anesthesia. Morton was familiar with the work of his former partner, Wells. He had witnessed his failure with nitrous oxide in 1844 in the Massachusetts General Hospital. Casting about for some remedy that would relieve pain of dentistry it is stated that Morton asked advice of his friend and preceptor, Dr. Jackson, who suggested sulphuric ether and the apparatus for administering it. Thus you see the close relationship between Wells, Jackson and Morton.

On September 30, 1846, Morton gave by inhalation a mixture which he called "letheon" to a man and painlessly extracted a firmly rooted tooth. Morton's successful experiment was published next day in the Boston Daily Journal. Dr. Henry J. Bigelow visited Morton's office and saw him extract a number of teeth under the new gas. Bigelow arranged with Dr. John C. Warren, Senior Surgeon of the Massachusetts General Hospital, to allow Morton to try his "new gas" in a regular surgical case. Letheon turned out to be sulphuric ether disguised with aromatics and coloring matter. The anesthesia was a success and the Massachusetts General Hospital adopted Morton's method, first forcing him to reveal to them the fact that sulphuric ether was the essential ingredient. The Staff would not endorse a secret remedy.

However, this did not deter Morton, who was a shrewd business man, and not a Doctor of Medicine at that time.

from securing a patent for his "new gas," under the name of "letheon." The day following the demonstration Morton applied to Mr. Eddy, an attorney, seeking to obtain a patent for his discovery. When Morton stated his case Eddy told him that Dr. Jackson was entitled to the credit of the discovery; but Jackson would not allow his name to be associated with a patent and resigned his interest in "letheon" to Morton for 10 per cent of the profits. Morton, on October 27, 1846, published his letters patent and offered to sell his secret remedy at \$25.00 per quart, with the privilege of using it for five years for \$100.00.

Crawford Williamson Long was born November 1, 1815, at Danielsville, Georgia. Both of his grandfathers served in the Revolutionary War, and their graves are marked by the United States Government. His mother was Elizabeth Ware whose parents moved from Albemarle County, Virginia, to Georgia soon after the Revolutionary War. Dr. Long's father was James Long, who was born at Carlisle, Pennsylvania, and moved with his parents to Madison County, Georgia when a child. James Long became a distinguished citizen of Georgia. Therefore, "Dr. Long came of excellent stock, inheriting intelligence, the instincts of a gentleman and sympathy for suffering."

At fourteen years of age Crawford W. Long entered Franklin College, now the University of Georgia, where he took the degree of Master of Arts at the age of nineteen years standing second in his graduating class. He was called the "baby" at college because of his age. His room-mate and best friend was Alex. H. Stephens, afterwards Vice-President of the Confederacy. Young Long taught school and took a medical course of one year at the Transylvania University, Lexington, Kentucky. In 1837 he entered the University of Pennsylvania and, after two years was graduated at the age of twenty-three. Among his professors at this university was George B. Wood, one of whose strong characteristics was

the condemnation of the early publication of cases and action of drugs. Wood's teaching probably influenced Long touching the publication of his use of ether for surgical anesthesia.

After graduation Long spent eighteen months "walking the hospitals" in New York. Here he saw much painful surgery because, forsooth, there was no other kind. Long made a special study of surgery and by his experience in New York attained the reputation of a skillful surgeon. He, therefore, had the advantage of a liberal education and training, both from a literary and a scientific standpoint. In 1841, when only twenty-six years of age, he settled in Jefferson, Jackson County, Georgia, where he acquired an extensive and lucrative practice. His office soon became the favorite resort for the young men of the neighborhood.

During the early days of the nineteenth century, laughing-gas frolics and ether frolics were common throughout certain portions of Europe and America. Dr. Long participated in ether frolics while he was attending the University of Pennsylvania and the hospitals of New York. It appears that, through public exhibitions by itinerant lecturers, the use of nitrous oxide for its exhilarating effects was known throughout the South. In December, 1841, or January, 1842, certain young men asked Dr. Long if he could procure some laughing-gas for them to inhale. Long told them that he had no means of preparing nitrous oxide nor of storing it, but that he had a drug, sulphuric ether, which was as safe and would produce the same exhilarating effect. It appears that one of the young men present had taken ether on a previous occasion, as Long had done many times. Long procured the ether and administered it to those present, also taking it himself.

Dr. Long's ether frolics quickly became of frequent occurrence in the community.

An original letter written by R. H. Goodman verifies this statement:

"I certify that on the first of January, 1842, I resided in Jefferson, Jackson County, Geor-

g'a, and that about that time myself with several other young men were in the habit of meeting at Doct. C. W. Long's Shop, and other rooms in the village and inhaling ether which he administered to us. We took it for its exhilarating effects. On the 20th of January of the same year I removed to Athens, in the above named state, where I introduced the inhalation of ether."

The writer, who, by the way, is not related to Crawford W. Long, has in his possession the original letter written by Dr. Long ordering ether for the purpose of an ether frolic. It was addressed to R. H. Goodman, Athens, Ga.

"Jefferson, Feb'y 1st, 1842.

Dear Bob:

I am under the necessity of troubling you a little. I am entirely out of ether and wish some by tomorrow night, if it is possible to receive it by that time. We have some girls in Jefferson who are anxious to see it taken.

Your friend,

C. W. LONG."

Dr. Long observed, following ether frolics, that both he and his companions had often received painful contusions of which they made no complaint at the time of inhaling the ether. He reasoned that, if a person inhaling ether could receive a severe blow without feeling any pain at the time, a surgical operation might be done upon a patient while he was under the influence of ether without the patient experiencing pain. The more Long thought of this matter, the more thoroughly convinced he became of the soundness of his reasoning. He talked it over with his friends many times. He proposed to a young man by the name of James M. Venable, who had two wens on his neck, and who had frequently inhaled ether, that he allow Long to etherize him and remove the wens. Venable finally consented to have one of the wens removed. The operation was done in Dr. Long's office March 30, 1842, in the presence of several witnesses. This was the first operation done in the world, certainly in modern times, on a patient rendered insensible by the inhalation of a drug.

I am submitting several certificates, which are given only in part, from those who were present and saw the operation.

The testimony of eye-witnesses cannot be controverted.

"Atlanta, DeKalb Co., Ga., April 3rd, 1853.

C. W. Long, M.D.:

It affords me pleasure to certify, and I do hereby affirm that I saw you perform an operation upon Mr. James M. Venable, to wit, the cutting out and removing of a tumor from the neck of the said James M. Venable.

The operation was performed when Mr. Venable was under the influence of sulphuric ether, produced by inhaling the same. I was intimate with Mr. Venable at the time of the operation and afterwards frequently conversed with him upon the subject, and he often told me that the operation produced no pain. The operation was performed in the town of Jefferson, Jackson County, and State of Georgia, in the year one thousand eight hundred and forty-two.

Yours, &c.,

W. H. THURMOND."

"On one occasion during that year (1842) I was present with James M. Venable in the office of Dr. C. W. Long in Jefferson, Jackson County, Ga., and witnessed Dr. C. W. Long cut out a tumor from the side of the neck of J. M. Venable while said Venable was fully under the effects of the vapor of S. Ether inhaled from a towel, and without his exhibiting the least symptoms of suffering pain from the operation."

"Georgia, Clark Co.

I, Edmund S. Rawls, of Rome, Floyd County, Georgia, on oath depose and say that on one occasion during that year (1842) I was present with James M. Venable, in the office of C. W. Long, in Jefferson, Jackson County, Georgia, and witnessed Dr. C. W. Long cut out a tumor from the side of the neck of J. M. Venable while the said Venable was fully under the effects of the vapor of S. ether inhaled from a towel, and without his exhibiting the least symptoms of suffering pain from the operation.

I conversed with James M. Venable frequently during the year 1842 and he uniformly asserted that he did not suffer pain from the operation.

E. S. RAWLS.

Sworn to and subscribed before

me this 2nd November, 1853.

E. L. NEWTON."

I also show Dr. Long's bill against Venable for the operation and ether. It does not look like a Boston bill:

"JAMES VENABLE

To DR. C. W. LONG, Dr.

	1842		cts.
January	28	Sulphuric ether	.25
March	30	Ether and exsecting tumor	2.00
May	13	Sulphuric ether	.25
June	6	Exsecting tumor	2.00

Georgia, Jackson County.

I, P. F. Hinton, Clerk of the Superior Court of said County, do certify that the above account is a correct copy of an original entry made in his book for Medical services for the year 1842.

Given under my hand and seal of office this 27th day of March.

P. F. HINTON, Clerk."

The fact that Crawford W. Long a young man only twenty-six years of age, had put a patient to sleep with ether and performed a surgical operation, soon became talk of the community and state. The story was noised abroad far and near; indeed, as expressed by some of Long's contemporaries, his discoveries became "notorious" throughout that section of the country. See what Dr. DeLapierre says about the publicity that Long's epoch-making work attained at the time.

"I, Ange DeLapierre, M.D., do certify that I resided in Jefferson, Jackson County, Georgia, in the year 1842 and that sometimes in that year I heard James M. Venable, then of said state and county, now deceased, speak of Dr. C. W. Long, then of Jefferson, in the County of Jackson, Georgia, now of Athens, Georgia, cutting two tumors from his neck while under the influence of the inhalation of Sulphuric Ether without pain or being conscious of the performance of the operation.

I do further certify that the fact of Dr. C. W. Long using Sulphuric Ether by inhalation to prevent pain in surgical operations was frequently spoken of and notorious in the County of Jackson, State of Georgia, in the year 1842.

A. DELAPIERRE, M.D.

Sworn to and subscribed before

me this 30th day of March, 1854.

N. H. PENDERGRASS, J.P."

In May, 1843, Dr. R. D. Moore, of Athens, took three medical students with him to amputate a leg. He said to them: "If I had thought of it before leaving home, I would have tried Dr. Crawford W. Long's great discovery, producing insensibility by the inhalation of ether."

Many other affidavits are at hand, but time will not permit exhibiting them.

The opponents of Long have made much ado because he did not rush into print for the exploitation of his discovery, which was destined to revolutionize surgery. Here is shown the effects of George B. Wood's teaching. Jenner

waited twenty years before publishing his discoveries in vaccination and then had much abuse heaped upon him.

Magruder calls attention to the fact that Webster defines "publication" as meaning "notification to the people at large either by word, writing or printing." By Long's affidavits it can be shown that he made a verbal publication to the public and profession without discrimination. He never ceased to urge physicians to employ ether anesthesia. His operations were always public to those who should see them, even the family not always being excluded from the operating room, as most of us do now.

During 1842 Long did several other operations under ether anesthesia and he continued to use his method for both minor and major operations as long as he lived.

Although Long was slow (1849) to publish his wonderful discovery in the medical journals, his candle was not hid under a bushel. The light of his achievement was destined to reflect its beneficent rays the wide world over. True, the Boston episode, fostered by the prestige of a great university, got the start from the standpoint of being made known in New England, which we admit contains that great city of learning called "The Hub." But isn't Georgia the peer of Massachusetts or indeed any other State? And is not knowledge made known to the citizens of Georgia just as important and deserving of the same recognition as if it were megaphoned from Massachusetts? Is a discovery published by word of mouth and repeated demonstrations of less significance in Georgia than in New England?

I maintain that Long did publish his discovery, in the most natural and practical manner possible; namely, by talking to the people and the profession, by advising other doctors to use ether as an anesthetic and by demonstrating to reliable citizens at operations his method of using ether whenever he had the opportunity.

We must acknowledge that the credit of priority belongs to Crawford

W. Long. Why he performed his first operation under ether before Morton had even graduated as a dentist, and four and a half years before Morton claims to have used "letheon" as an anesthetic; and two and one-half years prior to Wells' use of nitrous oxide. Will any one deny these facts?

I have no criticism of Wells, Jackson, Morton or their adherents; I honor them for their work and rejoice because of the emoluments that came to them, and I sorrow for the tragedies which caused their untimely deaths. Most assuredly, I entertain only feelings of the profoundest admiration for the illustrious men who have made the Massachusetts General Hospital famous for all time.

But let's notice another chapter in the history of surgical anesthesia. In 1849 Morton had a bill introduced into Congress to award him \$100,000 for the discovery of surgical anesthesia, claiming compensation because the United States Government had infringed on his patent rights. Jackson and Wells' family (Wells having died in 1848) contested the matter; Jackson declaring that he suggested the use of ether to Morton, and Wells claiming that he used both nitrous oxide and ether before Morton did. The contest was acrimonious and raged on through 1854. Long took no part whatever in the controversy, saying that he wanted no monetary reward for his discovery since he considered it a gift to suffering humanity; besides he preferred to have his professional brethren pass upon the merits of the case rather than a law-making body. However, at the earnest solicitation of his friends, he in 1854 wrote to Hon. Wm. C. Dawson, United States Senator from Georgia, simply stating the facts as to his discovery, but making no claim whatever for pecuniary reward. When Senator Dawson read Long's letter in Congress, the controversy suddenly fell flat and no money was ever awarded to any one.

At Dawson's suggestion Jackson went to see Long at his home in Athens. After examining Long's books and testi-

monials and interviewing prominent men as to Long's character, Jackson proposed to him to put in a joint claim; namely that Jackson was the first to suggest the use of ether and Long the first to use it. But Long declined, saying that he preferred that the matter be adjudged purely on its own merits. Jackson later frankly admitted to Dr. Long, and to Senator Dawson also, in a communication to the Boston Medical and Surgical Journal, April 11, 1861, that Long was entitled to the credit of the discovery of surgical anesthesia.

It is well known that truth can never be absolutely and eternally suppressed. In spite of all opposition, it will rise again and shine forth with all its effulgent beauty.

In 1877 Dr. J. Marion Sims, in the Virginia Medical Monthly, reviewed the story of surgical anesthesia and declared Long to be the real discoverer. Sim's article focused the attention of the medical world anew on Long and his work, and innumerable letters of congratulation, and distinguished honors from all over the world came pouring in upon him. We have time to notice only a few. His State Medical Society erected a monument to his memory at Jefferson. A life size monument of Long stands in Paris. His portrait hangs in the Capitol of Georgia, and in the "Anaesthesia Hall" in London. His Alma Mater, the University of Pennsylvania, unveiled a bronze medalion to his honor with imposing ceremonies. The inscription on this medalion reads:

"To the memory of Crawford W. Long who first used ether as an anesthetic in surgery March 30, 1842." The University of Georgia unveiled a monument presented by Dr. Joseph Jacobs. Innumerable articles and a few books have been written showing that Long was the discoverer of surgical anesthesia. Eminent men in this country and abroad, have lifted their voices declaring Long to be the real discoverer of surgical anesthesia.

Magruder says: "There can be no doubt that to Crawford Williamson

Long belongs the honor of being the first to discover and use Surgical Anesthesia, and acknowledgment is now made to him the world over, in Great Britain and Ireland, France, Germany, Russia, Australia, Mexico and the United States." The list is too long to mention even by name. Among the foreign contributors are Dudley W. Buxton, London, England and Sir George George Foy, Dublin, Ireland. When Sir

Frederic Treves operated upon Edward VII for perityphlitis, the first question the King asked on awakening was "who discovered anesthesia?" He was told "It was an American, Your Majesty, Dr. Crawford W. Long."

In the ringing words of Henry W. Grady, "It was Crawford W. Long who gave to the world the priceless boon of anesthesia."



THE USE OF GLUCOSE IN MEDICINE AND SURGERY*

GARNETT NELSON, M.D., Richmond

It is felt that the close alliance of Medicine and Surgery in the title of this paper is appropriate because the business of these two main branches of our profession is to such an extent a joint affair that it is difficult to consider the serious problems of either separately. A quarter of a century ago each seemed jealous of the other. As the psychologists would say, there was an inferiority complex, an inhibition; so that the internist feared to throw the light of the scalpel on his errors, and the surgeon claimed to be both a good internist and a good surgeon. It is a matter of everlasting credit to us all that during the present century internists and surgeons have formed alliances that exhibit confidence, harmony, and mutual respect. We concern ourselves no longer with an isolated, conspicuous condition, an achylia, an arthritis, a hernia, or a diseased appendix, but have broadened our horizon so as to view as a whole the individual in whom such a condition is present.

Our present knowledge of the use of glucose has been so recently acquired that even an encyclopedic survey of the whole subject does not take us back many years. Of course an accurate understanding, so far as it went, of the metabolism of carbohydrates has been a matter of common possession, certainly since the latter part of the last century; but the therapeutic value of glucose was poorly understood and its therapeutic use entirely empirical until the occurrence of two epochal events in the history of modern medicine. These were the discovery in 1912 of a method by which the blood sugar could be determined, and the discovery by Banting in 1922 of a pancreatic preparation in which there was a measurable quantity of the substance called insulin. Prior to 1912 the excess of sugar in hyper-

glycemia and the deficit in hypoglycemia were matters of guesswork. The use of insulin without accurate blood sugar determination would be hopelessly unsatisfactory, and the use of glucose without insulin seriously limited.

We should avoid the expression, "the discovery of insulin," because, as is the case with all other ferments, enzymes, and hormones, with the exception of epinephrin and thyroxin, insulin has not yet been discovered. We know its physiological action, at least in part, and can prepare, measure, and use it; but we do not know what we are using, not even the component parts that enter into its framework, much less its chemical formula. (Since the preparation of this paper it has been announced that John J. Abel has isolated insulin and has in his possession a small amount as a white crystalline powder).

The almost synchronous arrival of these two discoveries has added to the armamentarium of the modern physician instruments of precision that render simple and easy the management of problems that three years ago were utterly insusceptible of solution.

It is not intended to say that we know now all that can be known about glucose and insulin; far from it; but we do possess a certain amount of concise information substantiated by experimental evidence and clinical experience.

Indeed the knowledge of glucose and insulin is so far from being complete and finished that an attempt to write a paper bringing the whole subject up to date is handicapped by the continuous appearance of new items in the monthly journals from all parts of the world. Chemists, physiologists, pathologists, internists, surgeons are all interested and adding something of value from day to day.

In the preparation of this paper an effort has been made to leave the field of conjecture and to include only accurate knowledge. We will abstract and

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present briefly the chemistry and metabolism of glucose, recite what it actually does and why, state the chief indications for, and what results must come from its use, state the proper method of preparation and administration; and, for the sake of the impression they make, summarize a few illustrative case reports. This outline sounds prodigious, but the subject can be kept within the bounds of reasonable limits by alluding to some of its phases by statements so brief that they amount to little more than definitions.

Those who wish to amplify particular lines of study or to verify facts are referred to Hammarsten & Hedin's *Text-Book of Physiological Chemistry*; Macleod's *Physiology and Biochemistry in Modern Medicine*; von Furth's *Chemistry of Metabolism*; and the journals indexed in the *Quarterly Cumulative Index of the A. M. A.* for 1924 and 1925. There is no use going back of these two volumes because nothing will be found back of 1924 that has not been absorbed into the writings of the past two years.

CHEMISTRY AND METABOLISM

What we call blood sugar; that is, the sugar in the blood stream, is in part glucose pure and simple, in part glucose buried in obscure complex organic substances, useless to tissue until reconverted into a solution of glucose. Glucose is a monosaccharide hexose; that is, a single sugar with six atoms of carbon in each molecule, with the chemical formula $C_6H_{12}O_6$, and the structural formula $CH_2(OH), CH(OH), CH(OH), CH(OH), CH(OH), CHO$. It is a colorless, odorless body, neutral in reaction, becoming acid on boiling, soluble in water, soluble with difficulty in alcohol, insoluble in ether. It crystallizes well and is, therefore, easily diffusible through animal membranes, such as cell envelopes, by osmosis. It occurs abundantly in nature as such, in grapes, also in honey, sweet fruits, certain seeds and roots, and in the human and animal intestinal tracts during digestion; also in great abundance as more complex su-

gars, the polysaccharides, and in combination with different substances, the glucosides.

The exact structural formula becomes significant when we realize that our ability to use any and all carbohydrate foods depends on their being digested or metabolized into this exact proportion and arrangement of six atoms of carbon, twelve of hydrogen and six of oxygen, bound to each other exactly in accordance with this formula. Every cell in the human anatomy must have carbohydrate food. No carbohydrate can be used by the cells except glucose, and no ingested carbohydrate can enter the blood stream until it has first become free sugar in the intestinal tract, nor leave the blood stream to enter the tissue cells without first of all becoming a simple solution of this simple sugar in the blood plasma. Still further, even glucose is resistant to oxidation in man unless its molecule has been opened up by a number of agencies, among which is the pancreatic hormone.

The greater part of the energy used by man to warm his body and do muscular work comes from oxidation of glucose. One-half to two-thirds of the oxidizable food stuffs are sugars and starches, and further than this, sixty per cent of the amino-acids, the last known end-products of proteid digestion, and ten per cent of the fats, must be converted into glucose in the normal course of their metabolism. We see, therefore, that by far the most important chemical reaction, at least from a quantitative standpoint, in the human economy is the metabolism of glucose. When we ingest at our meals a generous well mixed diet, the whole of it except about forty per cent of the protein and ninety per cent of the fat must appear in the blood plasma as a solution of glucose or be utterly useless.

Not only is this simple monosaccharide of the importance indicated above, but it is also true that it is the one and only known food stuff that can be administered ready for use, in the raw, so to speak, directly into a vein to be immediately distributed and instant-

ly used by the heart muscle and other tissues all over the body. Neither fruit sugar, nor cane sugar nor any other form of sugar can be utilized.

The only carbohydrate products of carbohydrate metabolism in a human being that can be recognized by chemical means are glucose and glycogen. The glucose is mainly in solution in the circulating fluids. The glycogen is mainly deposited in colloidal masses in the liver, heart, skeletal muscles and other tissue cells.

Glucose gets into the blood stream from one or more of three sources: absorption from the intestine; hydrolysis of glycogen, particularly in the liver; and new formation of glucose out of non-carbohydrate substances such as amino-acids, or fats.

Glucose disappears by oxidation in the tissues; or by excretion, chiefly by the kidneys (a process of filtration); or by polymerization into glycogen; or by conversion into non-carbohydrate substance such as fat.

The amount of sugar in the blood stream varies within known normal limits, depending on one or more of these factors.

The sugar in the blood stream is present in both the plasma and the corpuscular elements, and normally has the same concentration in each. The entrance of the sugar into the corpuscles is not merely a matter of osmosis of a crystalline solution through the cell envelope into the fluid contents of the cell, but is regulated by some substance, an enzyme, within the cells themselves. The cells possess, on the other hand, an inherent ability to get rid of their sugar, and will discharge it entirely after standing a certain length of time outside of the body, as in a test tube in a laboratory. This inherent attribute of the corpuscles, by which they can absorb and discharge sugar at will, so to speak, can be taken away from them by washing in isotonic salt solution.

The literature relating to the behavior of glucose in the white and red cells was investigated with the hope of finding some evidence that the intravenous ad-

ministration of glucose in septicemia and other infections in some special way increased the phagocytic action of the polynuclear cells. So far as I know it has no such definite action. It does affect the volume and distribution of the leucocytes and is necessary as a food to provide heat and the energy for any activity whatsoever, and to this extent has a specific action, but to this extent only.

Further consideration of what glucose does normally leads us to a brief discussion of its action in the heart and skeletal muscles. The sugar in solution in the blood plasma is invited into the cells of the heart and skeletal muscles by some substance within the cells themselves, their own enzymes, there to form glycogen, the so-called muscle sugar. With each contraction and relaxation of a muscle a reversible diastatic action takes place. In the heart, for example, during systole the highly complex chemical substance glycogen is exploded into sugar and lactic acid, with the evolution of heat and work, and during diastole the ferment reverses itself and glycogen is again made out of these same substances.

This action may take place with immeasurable suddenness, in the winking of an eye, as a high explosive is converted into volatile gases, or more slowly, as in the movements of the more ponderous skeletal muscles.

There are still two main features in the normal life history of sugar that must be mentioned; i. e., its cycle in the liver, and the fact that glucose is absolutely necessary for the perfect metabolism of the fat of the human body. These two all important matters can not be gone into at this time. The latter will be left with the flat statement that perfect fat metabolism is impossible in hypoglycemia, and the formation of ketone bodies with acidosis is therefore inevitable in starvation. Fats are burned in the fire of carbohydrates. The former will be dealt with only to state that the liver possesses a powerful diastatic ferment able to convert the sugar in the portal circulation dur-

ing digestion into glycogen, and to reconvert the glycogen into glucose for general distribution.

So much for a cursory and superficial review of what is known of the normal metabolism of sugar. It must not be inferred that an attempt has been made to cover the whole subject, nor that the question of fermentation is the only one involved. We know, for example, that the body has some other means by which it can mobilize its carbohydrate supply to meet the laws of supply and demand, a nervous mechanism probably controlled by the so-called sugar center in the floor of the fourth ventricle; and I have omitted so far entirely any mention of the pancreas and other glands of internal secretion.

THE GLANDS OF INTERNAL SECRETION

Although the plasma, the red and white cells, the liver, the heart and skeletal muscles, the other tissue cells and tissue juices possess powerful diastatic enzymes of their own, they can do little or nothing with sugar without the aid of the pancreatic hormone insulin. Parenthetically it might be stated that a ferment is technically an organic substance, a living fungus or bacterium, whereas hormones and enzymes are inorganic. An enzyme belongs to and acts within the cell where it is created. A hormone is created within a cell and transferred in the blood stream to accomplish its purpose elsewhere, namely to activate an enzyme. However, the word ferment is loosely used to include all three.

It must not be believed that when we give glucose and insulin together the insulin pursues the glucose around in the blood stream and, on overtaking it, does something extraordinary to it. It has no such action whatsoever. Insulin in a solution of glucose in a test tube is inert. If muscle juice is added to the glucose and insulin, the glucose disappears.

This power of muscle juice and insulin is three times greater with the heart muscle than the skeletal muscles. Conversely muscle juice has a condensation power in the presence of insulin which

it otherwise lacks. The most that insulin can do to the sugar in solution in the plasma is to open up the links that bind together the atoms of carbon, hydrogen and oxygen, or shift the atoms so as to convert one kind of glucose into another more easily oxidized glucose. What insulin actually does is to enter the cells of the liver and other tissues, and, by activating their enzymes, create a vacuum, as it were, for sugar, so that the sugar in solution may be invited within and acted upon. Of course, this action is reversible. In diabetes, for example, insulin given alone enters the liver cells and increases the ability of the liver diastase to store glycogen, at the same time checking the tendency to convert glycogen into glucose; whereas in the normal animal insulin, first causing a hypoglycemia, causes a rapid disappearance of the sugar from the liver, heart and skeletal muscles.

As a rough analogy insulin may be likened to a pass key in the hands of a hotel porter, with which he can unlock any door and allow the entrance into any room of certain ingredients that will arouse activities previously absent. The key can turn the lock either way.

In view of the above the practice of giving glucose and insulin together is not to be encouraged. There is a glucose shock, and there is an insulin shock. The symptoms of glucose shock are: Increased temperature, cyanosis, rapid, weak pulse, anxiety; symptoms of insulin shock are: Sudden hunger, weakness, restlessness, pallor or flushing, rapid pulse, tremor, sweating, apprehension, vomiting and diarrhea, diplopia, vertigo and delirium, convulsions, collapse, unconsciousness, death.

There is nothing to be gained by giving glucose and insulin in the same solution, and, in the event of untoward symptoms, there may be confusion as to what is wrong. The treatment of the two conditions is antagonistic. Glucose shock is combatted by administering insulin. Insulin shock is combatted by administering adrenalin, with or without glucose, depending on the imme-

diate results. The symptoms of insulin shock are identical with those of hypoglycemia, but may occur in a diabetic with a normal blood sugar if the high sugar has been reduced to normal too rapidly. The action of insulin and adrenalin on the liver are directly opposed. In hypoglycemia it may be that the only needle work necessary is to give a hypodermic of adrenalin. This is of importance particularly to the pediatrician. There are reliable case reports of very young infants unconscious and evidently dying from persistent vomiting, with dehydration, hypoglycemia and acidosis, to whom adrenalin has been given, who have in a few minutes become conscious, able to swallow and retain fluids, molasses, honey, sugar, orange juice, candy, etc., with an uneventful and complete recovery.

What the adrenalin does here in part is, acting as a hormone, to force the liver diastase to turn loose as glucose whatever stored glycogen it may have and overcome the hypoglycemia, and acidosis. Of course, this action is evanescent and sugar must be immediately supplied by mouth or in some other way.

In addition to the pancreas and suprarenal capsule very little is known as to the effect on sugar metabolism of the other glands of internal secretion. We do know that there may be a high blood sugar in toxic goitre, and in certain diseases of the pituitary, and that there have been cases of diabetes, possibly of polyglandular origin, on which insulin has no effect; but this is all poorly understood, and remains to be solved, possibly today or tomorrow.

Before passing to a synopsis of acidosis and diabetes, the causes of hyperglycemia and hypoglycemia should be listed.

CAUSES OF HYPERGLYCEMIA AND HYPOGLYCEMIA

Hyperglycemia is a normal finding after a meal rich in carbohydrates, and in the pregnant woman. Pathological hyperglycemia is found in pancreatic deficiency; in certain cases of glomerular nephritis with hypertension; in certain

diseases of the thyroid, suprarenal capsule, and pituitary glands; after the administration of epinephrin, morphine, or strychnine; in brain injuries; in carbon monoxide asphyxiation; and in ether anesthesia, partially due in the last to disturbed breathing. (Note in passing that insulin prevents the hyperglycemia of ether anesthesia).

Hypoglycemia occurs first of all in starvation, as in persistent postoperative vomiting, pernicious vomiting of pregnancy, or the cyclic vomiting of infancy; also markedly in conditions of extreme shock, as from hemorrhage, or trauma; in the intoxication of protein cleavage after extensive burns; in prolonged muscular activity as in convulsions or a Marathon race; in increased heat production, as in fever; after exposure to severe cold; in local hepatic lesions; and in intoxications with phosphorus, arsenic, chloroform, and amyl nitrite.

DIABETES AND ACIDOSIS

Sugar from diabetic blood differs essentially from sugar from the blood of normal individuals. In diabetes there is too much sugar and a wrong kind of sugar, still glucose, but there is something wrong with its structural formula. After the injection of insulin the sugar from the diabetic is similar to that of the normal blood. Sugar disappears from the normal blood in a test tube. This glycolysis is much more active in normal than in diabetic blood. The condition that is the immediate cause of the diabetic state is not known. As was mentioned above, the greater part of man's energy and heat comes from oxidation of sugar. In diabetes there is an abundance of sugar in the blood stream, but the clinical picture is that of tissue starvation. Whatever this condition is, the effect of insulin is to oppose it.

The most puzzling fact about all this is that in the diabetic state there is an excessive production of sugar out of protein and fat. Knowing that the fats are burned in the fire of carbohydrates, it is easy to understand their imperfect metabolism into ketone bodies and the

resultant acidosis, but there is no clew as to why, in the presence of a superabundance of sugar, there should be further additions thereto from an unusual and excessive creation of sugar out of fat.

The acidosis of starvation, as from vomiting, and the acidosis of the diabetic state are due to the same ketone bodies, acetone, diacetic acid, and beta-oxybutyric acid. In the former the only substance possessing an antidoting action is glucose, but in those who are desperately ill the metabolism of the whole organism may be so disorganized that even glucose given intravenously can not be utilized, and it may be necessary to add insulin, taking care with very young children to give an excess of glucose, that is at least five grams to each unit of insulin.

In the hypoglycemia and acidosis of the well nourished, epinephrin may be used instead of glucose on account of its glycogenolytic effect on the liver, which has been mentioned above.

The acidosis of diabetes must be combatted with insulin. The resultant fall in blood sugar sets in immediately, and it must not be forgotten that the symptoms of hypoglycemia may develop in a diabetic with a normal blood sugar. The question is one of speed as well as quantity.

It has been commented as a matter of serious import that there is no fixed dose of insulin that can be advised, that a certain amount of insulin may not have the same effect on two different individuals, nor on a given individual when repeated. However, this does not seem peculiar when we consider that it is equally true of the simplest drugs we use, such as epsom salts, calomel, morphine, etc.

THE EFFECT OF INSULIN IN HYPERGLYCEMIA AND HYPOGLYCEMIA

In hyperglycemia insulin checks diuresis and arrests dehydration; in the blood stream it opens up the molecule of sugar or shifts its atoms so that it can be more easily oxidized; in the liver it increases the ability to store glycogen and diminishes the output of glucose; in

the heart, skeletal muscles and other tissues it enables their enzymes to utilize glucose; it checks the faulty metabolism of fats, and diminishes the excessive conversion of fat into sugar; infections are prevented or cured; gangrene is arrested.

In hypoglycemia it speeds up the metabolism of glucose, or in desperate cases where from exhaustion, starvation or shock there is no metabolism of glucose, even when given intravenously, it enables the heart and other tissues to utilize the sugar and overcomes acidosis and dehydration. In this connection it must be remembered that the chief metabolism of carbohydrates is in muscle tissue, and that the heart is three times as powerful in this respect as skeletal muscles. If insulin is used in hypoglycemia we must also give an excess of glucose in proportion to the insulin; in adults at least three grams to one unit of insulin; in children at least five to one.

INDICATIONS FOR GLUCOSE

Beneficial results are to be expected in the acidosis of starvation. Here it is imperative and often literally a matter of life or death. There is no substitute. In the pernicious vomiting of pregnancy glucose alone, or more surely with insulin, will accomplish a successful issue otherwise impossible. In poor surgical risks where there is profound exhaustion, weakness of the heart, and low pressure, the danger of operation is minimized or safety assured. In the intoxication of protein cleavage after extensive burns, in shock from hemorrhage or trauma, glucose supplies food and fluid, slows the heart, raises pressure and furnishes heat and energy. In postoperative vomiting and acidosis, the vomiting will cease and the acidosis will be corrected. In surgery of the brain where there is increased intracranial pressure and the brain is swollen, hypertonic glucose solution will lower the pressure and shrink the brain. There is abundant evidence that this is true. C. C. Coleman tells me that in operating for brain tumor, for example, he has often after trephining the skull

seen the brain protrude to such an extent that he feared to puncture the dura. He had then given 10 c.c. of a fifty per cent glucose solution intravenously, and in ten or fifteen minutes seen the brain withdraw into the skull, and has no longer feared to proceed with his operation. In the agonizing headache of the so-called benign hypertension hypertonic glucose solution will frequently shrink the brain and stop the pain.

THE PREPARATION AND ADMINISTRATION OF GLUCOSE

A chemically pure glucose must be used, dissolved in freshly distilled water. It should be boiled for at least ten minutes, and the solution should be water clear. It should not be kept over forty-eight hours because of the possibility of fungus growth. On account of the fact that glucose solution becomes acid on boiling, a buffer salt should be added. A very simple method of overcoming the acidity is to add five minims of a fifteen per cent solution of sodium hydrate to one thousand cubic centimeters of a five per cent solution of glucose.

If a markedly hypertonic glucose solution is to be used, it is safer to use the fifty per cent solution which is put out by Lilly in ten c.c. ampoules.

With glucose prepared as described above it can be administered by mouth, subcutaneously, intravenously, or by bowel, according to existing conditions. The most conspicuous thought to bear in mind is to give enough glucose to get the results desired. Usually for intravenous work a ten per cent solution, using five hundred to one thousand cubic centimeters in quantity, is strong enough. If there is marked dehydration, and it is desired to double the amount of fluid, it is better to use a five per cent solution. If a hypertonic solution is going to be used, it should always be given intravenously and in small quantities—ten cubic centimeters of a fifty per cent solution, or twenty c.c. of a twenty-five per cent solution. It should be remembered that the maximum effect of glucose is not attained

for about eighteen hours; and in poor surgical risks it should, therefore, be given at least twelve hours before operation if possible. Glucose given by bowel is frequently irritating, and will not be retained. Given under the skin in too high concentration there may be sloughing.

Whether or not insulin is to be used in addition to the glucose depends on the seriousness of the condition and can be determined from the factors outlined above. It is frequently necessary, and properly used never does any harm.

CASE REPORTS

One case is selected from the records of St. Luke's Hospital. Mrs. E. J. H., aged 34, height 5 feet 2 inches, weight 73 pounds, admitted complaining of nausea, vomiting, weakness and loss of weight. A tentative diagnosis of tuberculous peritonitis with adhesions and mechanical pathology was made. All efforts at feeding her proved of no avail. She was operated upon by Dr. Stuart McGuire. The tuberculous peritonitis was not present, but there was a band of adhesions constricting the duodenum to such an extent that the proximal side was markedly distended. On freeing the adhesions the bowel collapsed. Two days after the operation there was a severe acidosis with vomiting and such profound exhaustion that death seemed imminent. She was given glucose with insulin. The vomiting ceased promptly, the acidosis disappeared, and she made an uneventful recovery.

William Thalhimer reports that in the vomiting of pregnancy the vomiting is caused by some sort of faulty metabolism and of itself produces a starvation acidosis, which in turn aggravates the vomiting, so that there is a vicious circle. A woman, aged 20, pregnant for six or eight weeks, had vomited everything for three weeks. Her urine contained four-plus acetone. She was given glucose with insulin, and three hours after beginning the glucose and insulin nourishment by mouth was retained. She went to full term without further trouble. He advises repeated small

doses of insulin, in order to avoid insulin shock.

O. H. Petty reports a case of diabetes in whom, after giving insulin, shock developed with a normal blood sugar. He comments that it is therefore clearly established, so far as insulin shock is a quantitative affair at all, it is not the tremendous reduction in the amount of blood sugar that causes the symptoms, but the excessively rapid reduction.

Richard Priesel reports a case of a moribund infant of twenty-two months, with acidosis, who was treated with 300 c.c. of ten per cent glucose and insulin, one unit to five grams of glucose. Improvement was prompt and recovery complete. He states that in small children with alimentary intoxication, acute diarrhea, vomiting, sudden loss of weight, fever, depressed fontanelles, deep-seated half-closed eyes, and serious weakness of the circulation, glucose and insulin have seemed to prevent what would have been otherwise a fatal termination.

David Greer reports a case of acute cyclic vomiting in which the former methods of treatment including gastric lavage, saline catharsis, orange-juice, and 300 c.c. of three per cent glucose subcutaneously were of no avail. 250 c.c. of five per cent glucose were given subcutaneously and forty-five minutes later ten units of insulin. There was only slight improvement, and the urine was positive for albumin, sugar, acetone and diacetic acid. Five more units of insulin were given with no additional glucose. Improvement was prompt and continuous, and recovery complete and uneventful.

C. F. Nelson reports cases of infants apparently moribund from vomiting and acidosis, in whom cures have been effected with glucose and insulin, and states that in pediatrics the indications for glucose are cyclic vomiting, postoperative acidosis, the acidosis following prolonged or acute watery diarrhea, the acidosis occurring in the course of infections, or initiated by them, and the acidosis of no demonstrable etiology whatsoever that

appears out of a clear sky in younger children.

Lawrence Litchfield reports several cases of patients desperately ill with pneumonia, to whom glucose was given intravenously with beneficial results. It is commented that patients with pneumonia are often hard to nourish, dehydrated, and the heart muscle is almost always in trouble. Glucose furnishes them with food and fluid and nourishes and stabilizes the heart muscle. It should be added that better results are to be expected here if insulin is given with the glucose, although the artificial administration of sugar of itself causes stimulation of the sugar-destroying functions of the body.

Walter Edmund Levy reports a case of a woman, aged 26, who was almost moribund from vaginal hemorrhage. She was treated with glucose intravenously and by hypodermoclysis. She was transfused and stimulated, and supported in every way possible. Nothing was accomplished. Her pulse was 152, watery and irregular. Her systolic pressure was 70, her breathing rapid and shallow. There was great restlessness with nausea and vomiting. In short, death seemed impending and inevitable. She was given five units of insulin, which was repeated in thirty minutes. A little later she was given 500 c.c. of ten per cent solution of glucose with twenty units of insulin. Improvement was immediate and she finally recovered. It is commented that without the insulin she was too desperately ill to utilize the glucose, and although she had a large intravenous infusion of glucose and a transfusion of blood, there was no improvement until the insulin was used.

Burnhandine states that in major operations, despite the most careful examination of the heart, lungs, liver and kidneys beforehand, unforeseen accidents may occur during or after anesthesia which may place the patient's life in danger, and that it is certain that the greatest danger arises from disorders of the circulatory system from general weakness and from insufficiency of the internal secretions. He reports thirty

cases in which he has used glucose before operating, and states that the cardiac movements became stronger and more regular, there were no cases of collapse nor cardiac debility, the arterial tension increased slightly, the pulse became strong and full, and there was no nausea nor vomiting after operation.

Thalhimer presents three cases of severe post-operative acidosis in patients of 45, 16 and 5 years respectively, with recovery following the use of glucose solution intravenously and the hypodermic administration of insulin. Fisher and Shell report the recovery of two cases of post-operative acidosis, and one of pre-operative acidosis, with the use of glucose and sufficient insulin to oxi-

dize it.

Ginzburg reports a case of a child four years of age, who two days after an adeno-tonsillectomy began to vomit and developed extreme restlessness with dyspnea, tachycardia and staring sunken eyes. A moribund state developed rapidly. He was given 250 c.c. of ten per cent glucose with 10 units of insulin, and in a few minutes became quiet and fell into a deep natural sleep, from which he was aroused at intervals to take orange-juice and syrup by mouth. He had no further trouble.

In conclusion I wish to thank Dr. S. W. Budd, Dr. Joseph T. Graham and Dr. James H. Smith for their assistance in preparing this paper.

HEMOPHILIA*

C. S. LAWRENCE, M.D., F.A.C.S., Lawrence Clinic, Winston-Salem

Personal History: 10-25-25. Male, aged 30, white, single, farmer. Father and mother living, well and healthy; three brothers, two of whom are bleeders; two sisters, living and well.

Chief Complaint: Pain in abdomen. Three days ago was taken with severe general abdominal pain and has been confined to bed since. Nine months ago he began to suffer with pain in right thigh, and his general health began to go down. About this time he noticed a soft mass just below Poupart's ligament which would pulsate, larger at times. About one month ago this mass began to show above Poupart's and extend well up on the abdomen. For the past three days he has had a continuous hiccup and vomited occasionally.

Past History: Has had usual diseases of childhood, none severe. He has never been robust, was troubled with frequent attacks of tonsillitis during childhood. Teeth have been diseased for many years. He has been a free bleeder from slight wounds and has had many attacks of acute articular rheuma-

tism. Five years ago he received a blow on the front teeth which loosened one and he bled "white." It was thought that he could not live. A slight pinch or blow on the soft tissue will cause black and blue spots which will last for days.

Physical Examination: Temperature 99, pulse 120, respiration 24. When first seen at his home he gave the impression of a man in *extremis*, propped up in bed, labored breathing, constant hiccup, heart action rapid and feeble. Chest was clear, abdomen distended, tympanic in front and dull in the flanks. Just below Poupart's ligament a soft mass can be seen which pulsates with the heart. (On close examination this pulsation is found to be due to the mass resting on the femoral artery.) This mass is continuous with a mass above Poupart's extending to the right costal margin; pressure on the lower mass enlarges the upper mass and *vice versa*. The teeth show several fillings and caries. The tonsils are enlarged and cryptic; the skin is pale and has a slight lemon tint, bones and joints are free from disease; no lymphatic or neuromuscular disease.

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

Laboratory:

Urine: trace of albumin, few pus cells.

Blood: 10-25-25. 3,000,000 red, 6-500 white, 50 per cent hgbn., platelets 300,000, coag. 30 min.

Treatment: 10-25-25. 500c.c. whole blood given by direct transfusion; no reaction.

10-27-25. 3,900,000 red, 5,650 white, 60 per cent hgbn., C. I. 76, coag. time 11 min. Patient shows much improvement.

10-30-25. 200 c.c. whole blood by direct transfusion; slight reaction.

11-3-25. Discharged; no evidence of bleeding. There has been much reduction in the size of tumor mass in groin and abdominal wall. Patient able to walk, sleeps well, feels good. Coagulation time 11 min; hgbn. 85 per cent. This patient has been followed since discharge. He has had one slight attack of acute swelling and pain in left knee joint. The soft mass below Poupert's remains but is smaller and free from pain. He has not had another hemorrhage.

Our patient is in the third generation of known hemophiliacs. His grandfather (a bleeder) had six daughters and three sons, none of whom showed this abnormality; yet, in five generations fourteen hemophiliacs trace their affliction to this common ancestor.

Hemophilia is limited to a definite entity and does not embrace all conditions which have a tendency to bleed. The condition is limited to the male, but transmitted by the female. The disease is characterized by a marked tendency to hemorrhage which sometimes occurs apparently spontaneously, but as a rule follows trauma. Hemophilia once established is persistent, though there are variations in its intensity.

Etiology: Otto, in 1803, first published an account of hemophilia. He observed that the disease was transmitted through females and occurred only in males. In 1820, Nasse published his investigations on the disease and noted this same fact, which law of heredity is

known as "Nasse's Law." Grandidier, Legge and Strumpel in their monographs made valuable contributions to the subject, but accepted the existence of the disease in females. However, Bulloch and Fildes, in their most excellent monograph, in 1911, have pointed out anew what seems to be accepted as final, that hemophilia does not occur in females, and that the reported cases in females bear only a superficial resemblance to the disease seen in males. Many of the cases reported in females have undoubtedly been chronic purpura hemorrhagica, and should have been ruled out if the number of the blood platelets had been noted.

There have been many excellent genealogical trees worked out, showing instances of transmission of hemophilia in direct line for many generations. After a most painstaking critical investigation of the reported cases, Bulloch and Fildes express their belief that "there would appear, however, to be something in the view that hemophilia is largely confined to the Teutonic race."

Pathology: Little is known concerning the nature of the disease. Hemophiliacs are apparently normal in every way except for a tendency to hemorrhage. Post-mortem shows normal organs. Some observers claim abnormally thin blood vessel walls.

The Blood: Careful studies of the blood in typical cases have shown the numerical count to be normal. The platelets are never diminished in number, on the other hand they are increased especially in cases in which there have been severe hemorrhages. The one absolutely positive finding in the study of hemophiliac blood is that the coagulation time and the prothrombin time are abnormally long. The coagulation time is often an hour, sometimes longer and rarely as short as twenty minutes. The factors necessary for the formation of the blood clot are:

"(1) The interaction of thrombokinase, prothrombin and lime salts resulting in the formation of thrombin.

"(2) The action of thrombin and fi-

brinogen resulting in the formation of fibrin, the insoluble framework of a blood clot.

"Prothrombin, fibrinogen and lime salts are soluble and in the blood plasma; thrombokinase is not in the blood plasma, but in the formed elements of the blood and tissues, e.g., blood platelets, endothelium of blood vessels and the tissue cells. It is therefore, due to one or more of the above factors being abnormal that hemophilia develops." (Radford).

It has been observed that the blood platelets are slow in the formation of thrombin (Ninot & Lee). This observation has been made clinically in transfusion of hemophiliacs; the clotting time has been lowered to remain so for the life of the platelets, 24 to 48 hours.

Symptoms: The chief symptom is bleeding from slight trauma, which tends to persist in spite of ordinary means applied to control hemorrhage. The hemophiliac is more prone to bleed from those tissues which do not ordinarily produce a large amount of tissue juice which tend to control hemorrhage, viz., mucous membrane, such as the gums, cartilage and synovial membrane about joints. They do not bleed from a pin prick, though fatal hemorrhage may occur from a scratch. A blow on the soft tissues often produces a large hematoma; hemorrhage may take place in muscle and follow fascial planes producing large masses and much pain. Joint symptoms are common in hemophiliacs.

Diagnosis: Family history of bleeding in the male. Normal blood count, normal bleeding time, with a prolonged clotting time make the diagnosis. Hemophilia is to be sharply differentiated from purpura hemorrhagica. The blood platelets are much reduced in purpura and normal or increased in number in hemophilia. Purpuric spots do not occur in hemophilia.

Treatment: Hemophiliacs should lead a life guarded against traumatism. Strict hygienic principals should be car-

ried out. Many remedies and appliances have been recommended for control of hemorrhage. The most efficient and trustworthy is the transfusion of whole blood. The repetition of transfusion should be governed by the clotting time. The amount of blood given does not seem to bear any special relation to reduction of clotting time. The French surgeons report that 20 to 40 c.c. of citrated blood will reduce the clotting time from several hours to normal.

Surgical Care of Hemophiliacs: "Nothing has yet been ascertained as to the essential nature of this strange complication (hemophilia). We do not know wherein consists the defective coagulation, which may take 30 to 50 minutes to accomplish, as compared to the 4 to 5 minutes in normal blood. Must we accept what seems a counsel of despair, or is it a counsel of perfection when non-sentimental eugenists forbid the girls of hemophilic families to marry, or if they do to stipulate that they shall not bear children?"

Hitherto the surgical rule has been to confine operation upon hemophiliacs, to those of primary surgical urgency. Can we do anything to qualify hemophiliacs for expedience operations, and render the proceedings reasonably safe? Several experiences in this regard make me think that we can. There are degrees of severity in hemophilia, and if we take the milder forms we may test by Wright's process before and again after the few days of preparatory treatment by calcium salts, hemoplastic serum, or repeated small transfusions of homologous blood at short intervals. Even the subcutaneous injection daily of 400 c.c. of any mammalian blood, or of human blood not necessarily homologous, may temporarily increase the thrombin elements, and enable us to discriminate those who do not respond, and remain ineligible for operation, from those who do.

Sinclair, Thomas: The surgery of the blood. The British Med. Jour., March 11, 1922. Vol 1, p. 22 (excerpt from a lecture).

IN MEDICINE AND DENTISTRY NO LAGGARD NEED APPLY

P. C. HULL, D.D.S., Charlotte

On the road to progress and scientific knowledge there is no place for the laggard. The world owes us nothing and we should not profit by the labors of others, without contributing our portion. If this is rational thought as applied to the individual generally, then by the same token there is no place for the laggard in medical or dental fields.

The wheels of progress are constantly moving and moving so rapidly that we as professional men, cannot afford to become laggards. Wonderful progress is being made in the arts and sciences particularly; still there are new fields to be opened and much work to be done; hence each of us should work with all his might.

To hope for a long and useful life, we, as scientific men in our professions, must be free from faction and friction; from antagonisms or jealousies; from politics or perfidy. Politics may be necessary in governmental or industrial organizations, but it has never contributed much to science. The world of science owes nothing to politics or politicians.

In the electrical world humanity owes much to Edison; in the medical world humanity owes much to Pasteur; the world and humanity owe much to dental science, and dental science owes much to Wells, one of the fathers of anesthesia. Verily these men are three disciples of human progress. Politics never aided the bearers of these illustrious names, nor did politics inspire them to dream ambitious dreams. Politics should be beneath the dignity of all on whom scientific progress must depend. We must discourage one in our ranks with a chip on his shoulder or an axe to grind.

We do not want to be known as a "silk stocking gang" or a bunch of high-

brows or lowbrows; nor do we want to be known as a clique or set of egotists. There are many, many radical teachings with which we think no progressive thinker can agree. We do not believe that an acute apical disturbance or roentgenographic evidence of a slight past pathogenic condition of a root-end necessarily condemns a tooth; nor do we belong to the one hundred per cent club and demand that all pulpless teeth be subjected to the cold steel process. We do not think that extraction is the only cure for pyorrhea alveolaris; nor do we believe ironization is the only method by which root canals can be properly sterilized and filled.

We do not believe that all dentistry should be divided into specialties and practiced only by specialists; nor do we believe that the grand and wonderful old family physician should ever cease to be.

We do not believe that the degree of Doctor of Dental Surgery is beneath the dignity of any man's ambitions, but we do admit that a degree in medicine is a valuable adjunct to graduation in dentistry; but and by the same token, would not the possession of the dental degree also broaden the physician of the future? It would, and yet until such time as medical science and dental science shall reach the fairylands of preventive medicine and preventive dentistry, the physician remains chiefly the guardian of diseases, while the dentist is gradually becoming in a large part, the guardian of health. Surely the well trained dentist will work with the physician, but not necessarily for him. And we do not believe that intelligent and scientifically correct diagnoses are to be made without the respectful interchange of opinions and cordial cooperation of physician and dentist.

SKETCH OF THE HIGHSMITH HOSPITAL, FAYETTEVILLE

The Highsmith Hospital was organized September 1, 1899, as the Marsh-Highsmith Hospital and was operated under this name until 1904, at which time the building was purchased by Dr. J. F. Highsmith and the hospital incorporated as the Highsmith Hospital. The hospital has had twenty-seven years of continuous service and has maintained a school of nursing from the beginning.

The hospital has had the distinction of being an A grade hospital following the first survey by the American College of Surgeons.

The New Highsmith Hospital has been planned with three points in mind: 1st, Better service to patients; 2nd, Better facilities for diagnosis; 3rd, Conservation of nurses' energy.

The building is in the form of the letter X with two wings and the center erected—which gives the possibility of future extension. An X planned building makes every room an outside room with every exposure. Each room is equipped with running water, clothes closets, individual bed pans, etc., radio and telephone service. The hospital would be better called a "Hotel for the Sick."

To facilitate better service to patients and conserve nurses' energy, there is a central nursing station on each floor containing medicines, lockers for treatment trays, ice bags, hot water bottles, rubber sheets, extra linen, etc., so that a call from a patient insures prompt service with the expenditure of the least amount of energy.

One complete floor is devoted to diagnosis; on this floor are the general waiting room, business offices, x-ray and physiotherapy laboratories, and around the waiting room, very uniquely arranged, are the doctors' offices. Each suite of offices consists of a private waiting room, office, examination room, dressing room and toilet.

The cystoscopic department is directly connected with the x-ray department. There is ample provision made for the

deep x-ray machine.

There is direct elevator service into the emergency operating room.

The diagnostic floor contains Dr. Highsmith's private library, living rooms for the interne and three rooms for the accommodation of patients' relatives.

There is a complete hydrotherapy department on the first floor.

The wards are as carefully planned as the other parts of the building, having the same features, with two and four beds to the ward. A few private rooms have been provided for Indians and colored patients.

There is space for contagious diseases and for mental cases.

The laboratory is on the floor below the operating rooms with plenty of space for extension.

The operating room pavilion is on the third floor; this was so arranged as to equalize distance.

There are two operating rooms finished in grey tile with Stedman rubber flooring, sterilizing room equipped with sterilizers, laundry tub, and instrument sink; delivery room; nurses work room, which includes supply closet, toilet and lavatory; anesthetic room; doctors' dressing room, and a small reception room to accommodate the patients' relatives. This pavilion may be closed when not in use.

There is a roof garden over each wing giving a space 72x33 feet for sunshine and fresh air.

The bungalow effect on the roof contains a big enclosed sun parlor, pool table, electric horse and vibrator, showers for men and women and two rest rooms. The doors are all large enough to take a bed to the roof.

There is a central steam plant, complete electric refrigeration, laundry, autopsy room, plenty of storage space, three garages, and a very complete nurses' home.

The building is of steel and concrete, therefore fire-proof.

TESTS FOR LIVER FUNCTION*

NANNIE M. SMITH, M.A., Charlotte

The fact that the liver has a number of distinct functions the knowledge of which is still incomplete, makes the functional study of this organ a difficult one. The function of the liver first recognized was that of bile formation, and excretion. It is known that the liver plays an important part in the carbohydrate and protein metabolism. In addition to these functions numbers of other activities have been ascribed to the liver.

There is no known single test which measures liver function as a whole, but many have been devised in an attempt to measure the degree of impairment of this organ's functions. With the exception, however, of the group of tests dealing with the excretory function of the liver they have proved to be of little clinical value. It is this group of tests which promises to be of definite clinical usefulness, which are to be considered here.

Of these tests which are being studied at present those based on dye excretion have probably received the greatest attention. Dyes of the phthalein series have been studied extensively. The Rowntree-Rosenthal liver function test is based on the ability of the liver to excrete the dye, phenol-tetrachlor-phthalein, from the blood stream. Five mg. of the dye per kilo of body weight are given intravenously, and specimens of blood collected after 15 minutes and after an hour. The amount of the dye in the serum of each specimen is then determined.

In normal persons from three to five per cent of the dye is present in the blood at the end of 15 minutes, and no dye is present at the end of an hour. In persons suffering from liver disease there is a retention of the dye at the end of an hour. It is claimed that the quantitative estimation of the dye gives quantitative figures of the degree of hepatic impairment. The phenol-tetra-

chlor-phthalein test however is impractical for the majority of clinicians. Its disadvantages have been pointed out by Maurer, Siegfried and Gatewood. The use of the dye is not without danger. The high incidence of thromboses, chills and local reactions is a serious objection to its use. The dye circulates in the blood as a colloid suspension rather than a crystalloid solution. Its existence in this form probably accounts for the production of thrombi.

The dye is not eliminated by the liver alone; traces appear normally in the urine. The amount is increased when there is abnormal retention of the dye in the blood. In the quantitative estimation of the dye there is considerable inaccuracy in reading the dye concentration in the presence of bilirubin. Ottenberg and Abramson have reported the production of liver necrosis by the use of phenol-tetrachlor-phthalein experimentally. In an attempt to overcome some of the difficulties encountered in the use of phenol-tetrachlor-phthalein Rosenthal and White have recommended the use of bromsulphalein.

The use of smaller quantities of this dye is possible since a much larger quantity of it is eliminated in the bile. Normally, following the injection of 2 mg. of this dye per kilo of body weight, it is completely removed from the blood stream in 30 minutes. In liver disease it is retained in quantities varying from 0 to 100 per cent of the amount injected, the degree of impaired function being expressed by the amount of the dye present in the serum at the end of 30 minutes. Bromsulphalein is a more satisfactory dye than phenol-tetrachlor-phthalein.

It is eliminated almost entirely by the liver; but in cases of liver disease with abnormal retention of the dye in the blood, it is excreted in the urine in amounts varying from a trace to 20 per cent of the amount injected. It circulates in the blood in a soluble form. It

*From the Laboratory of Dr. Harvey P. Barret.

is non-toxic in the dosage used for the test and causes no local irritation of the vein wall.

Recent studies have been made by Kerr and his associates on the rate of elimination of the dye, rose bengal, from the blood. 100-150 mg. of the dye is injected intravenously and specimens of the blood are collected at the end of two, four and eight minutes, clotting being prevented by the addition of potassium oxalate. The amount of the dye in the plasma is then estimated. Patients with definite cirrhosis or other extensive liver disease show a marked retention of the dye in the blood. Obstruction of the biliary passages causes a retention of the dye. In all other cases studied by these investigators the figures are within normal limits.

Rose bengal is claimed by these workers to be an ideal type of dye for the study of liver function. It is non-toxic; it is a crystalloid; it is eliminated by the liver alone (in only one instance was the dye observed in the urine and then there was only a trace); and it remains in the circulation long enough to allow determination of the dye concentration in the blood plasma to be made.

The estimation of the bilirubin content of the blood serum affords an important index to the clinical condition of the patient. It is known that normally a small amount of bilirubin is present in the blood serum. The bilirubin content is increased in hemolytic diseases such as pernicious anemia, hemolytic icterus, hematomas, malaria and typhoid. It is increased in diseases of the biliary system such as cholangitis, cholecystitis, cholelithiasis, adhesions about the gall bladder and diseases of the liver. The bilirubin content is decreased in secondary anemia. Van den Bergh used the Ehrlich diazo reaction in estimating the amount of bilirubin in the blood serum. The Van den Bergh test consists of two reactions, a direct reaction which is a simple qualitative test, and an indirect reaction which is a quantitative test.

There are four types of the direct reaction: the immediate direct reaction, the delayed direct reaction, the negative direct reaction and the diphasic reaction which is a combination of the immediate and delayed direct reactions.

All of the forms of bilirubin which gives these different types of reaction give a positive indirect reaction with the diazo reagent in the presence of alcohol. The amount of bilirubin present is estimated colorimetrically. When the immediate direct reaction occurs bilirubin is thought to be present in the form in which it occurs in bile. When this type of reaction occurs obstructive jaundice is present. Either the delayed direct or the negative direct reaction may occur when there is increased bilirubin of the hemolytic type.

Bernheim has described a method for measuring the bilirubin content of the blood which is much simpler than the Van den Bergh test. So far as is known the yellow color of normal blood serum in the fasting individual is due to bilirubin. The depth of this color may be measured and expressed by a number which has been called by Bernheim and others, the icterus index. The depth of color of the serum (free from hemolysis, and obtained from a fasting individual) is measured by comparison, in a Bock-Benedict colorimeter, with a standard consisting of a 1-10,000 solution of potassium dichromate. The icterus index is obtained by dividing 15 by the colorimeter reading. The normal index is from 4 to 6. The icterus index is higher than 15 when clinical jaundice is present. An index ranging between 6 and 15 indicates latent jaundice.

From clinical experience with the various tests for liver function it would seem that the most practical, and therefore the most useful, of all the tests is the icterus index combined with the qualitative or direct Van den Bergh test. Much useful information can be obtained from the use of these two tests.

PRESIDENT'S PAGE

A. J. CROWELL, M.D.

I wish in this way to express my grateful thanks to the members of the Tri-State Medical Society for the great honor they conferred upon me at Fayetteville by electing me President of the

I recognize the fact that it is largely a manifestation of friendship rather than my fitness for this position. I accept the honor as a token of friendship and of appreciation of my faithful attendance upon its meetings. After all, what is greater than true friendship, manifested by the bestowal of positions of honor and trust?

In assuming the duties of this office, no one could feel more keenly his unfitness, but I pledge my best endeavor to uphold the high standard set by my predecessors. I solicit your hearty cooperation and will appreciate any friendly suggestions and criticisms from any member of the Society. It is the Society's greatest usefulness to its members and to suffering humanity which we covet.

The Editor of Southern Medicine and Surgery has kindly consented to set apart a page in the Journal, known as the "President's Page," through which he may communicate any idea or plan to further the best interest of the Society, which may occur to him.

May I suggest that each member determine to secure at least one additional member during the year. There is inspiration in numbers. In unity there is strength, and without cooperation failure will result in any organization.

We have in mind some definite plans to suggest in the next issue of the Journal, which we believe will stimulate a greater interest in the Society. In working out these plans every County Medical Society, as well as individual, in the three States can play an important part toward making this the outstanding Society of the South. In the meantime, let us have your suggestions in order that we may assimilate and profit by them.

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*A journal for the promotion and diffusion of
usable medical knowledge.*

The Fayetteville Meeting

So many features of exceptional interest and profit were afforded by this meeting that one undertaking to discuss it is confronted by a veritable embarrassment of riches.

The officers of the association had arranged a programme nicely suited to its membership and to the occasion; the speakers in the public meeting, happily fitted by position and native endowment for the duties of the hour, testified to the magnitude of the achievement of medicine for the general good, acknowledged the debt which civilization owes to the regular doctors, and, at least by implication, pledged themselves to the support of the followers of Pasteur, rather than Palmer; of von Behring and Osler, rather than Abrams and Mrs. Eddy;—while the Fayetteville doctors' hospitably provided refreshment and good cheer to fill the intervals between scientific sessions.

Fine and complete as was the provision made for the care of their well guests, it could not compare with that which has been made for those whom sickness delivers to their care. It is nothing short of amazing to see the wonderful hospitalization facilities of a city of this size and to meditate on the faith and courage which impel one

of these doctors to expend a half million of dollars on a new "hotel for the sick."

But the greatest feature of the meeting is yet to be touched on. There is no dearth of proofs, in any literature, of the alacrity of mankind to speak out for popular causes. We have it on the most undisputed authority that, "The poor is hated even of his own neighbor: but the rich hath many friends"; and "rushing to the rescue of the victors" is one of the commonest of observations. Therefore it is, that, when we see one come out boldly on the side of a just cause, whose popularity has tremendously waned, we hail his message with glad and proud acclaim.

Our retiring President stood for those idealistic principles so clearly set forth by our Great War President, when they were on the tongues and in the hearts of the multitudes; he stands for them now, when more timid or less thoughtful men have either renounced them utterly, or whisper them in corners. His soul-stirring appeal should reverberate round the globe. That preventive medicine is by far the most important branch of our profession today is a truism, needing no substantiation. The prevention of war would be an advance in preventive medicine beside which all our boasted achievements would make but a puny showing. This makes it peculiarly the doctors' job. And this says nothing of the many other, and even greater goods, which would thus be achieved.

Who does not remember the flush on the cheek and the fire in the eye of the soldier, whether general or private, as he earnestly talked of the future when the "War to End Wars" had been won; and a New Era had dawned on a world forever freed from the possibility of the coming of such Days of Wrath; of the return of conditions of nation-wide and world-wide arson, rapine and murder which constitute War?

Hardly were the guns cooled before many of our foremost politicians threw off their masks and let it be known that, so far as they were concerned, these solemn assurances were but merry jests

between "important" men, to whom, in the division of labor, came the opportunity to *make* wars, for lesser men to *fight*. And on the heels of this open—even boastful—admission of perfidious betrayal of our own men in khaki, came our country's shameful abandonment of bleeding, ravaged and still threatened France; our open repudiation of an agreement, honorably entered into and faithfully adhered to, until we showed the rest of the world of how little value was our bond.

Is it any cause for wonder that the four million soldiers who had been thus duped and flouted found it difficult to adjust themselves to the mode of thought they found prevailing when they returned from France? Is it strange that from every pulpit of the land go out lamentations over the decline of the influence of idealism; or, that, many rostrums and more publications are devoted frankly and openly to the gospel of selfish indulgence?

But the League of Nations is not dead. It is going calmly on its way doing good indiscriminately to its supporters, to its well-wishers, and to "those who despitefully use" it. Leaders will arise worthy to wear the mantle of Wilson and, finding a time more propitious, will seek out and so play upon those "elusive chords" as to bring forth a mighty chorus of "peace, good will toward men."

About Departments

With this issue Dr. Hamilton W. McKay takes charge of the department of Urology. His first editorial expression shows such a grasp of the possibilities of a department in a journal published for doctors in general, and such clear-cut ideas for making these possibilities actualities, as to constrain the editor of the journal to express his gratification and his confidence.

The function of a journal of general medicine is to serve the general doctor. It cannot hope to be the first to publish advances in any special line. This service is rendered by the mouth-pieces

of the various societies of specialists, by the experimental and research journals, and by those publications devoted to diseases of any one of the different organs or systems of the body.

A gynecologist, an ophthalmologist or a neurologist does not consult a journal of general medicine for new and advanced information in his line; he goes to Surgery, Gynecology and Obstetrics, the Journal of Ophthalmology, Otology and Rhinology, or the Archives of Neurology. And this is as it should be.

But this does not mean that there is not a common ground afforded by the department editorial columns of a journal of general medicine on which all doctors may meet with profit to all. No matter what disease may afflict a man, woman or child, the practitioner is more than apt to have to assume a part of the responsibility for the treatment, either pre-, post- or throughout.

For the best results it is necessary that the surgeon know how a given case developed, how the patient has borne previous illnesses and to what conditions he is to return. It is equally needful that the referring doctor know what points in the case decided the surgeon on his plan of treatment, just what that treatment was, how the patient responded to these procedures, and how and why certain post-operative care should be given. These many times multiplied experiences serve as guides for the management of future patients, determine rules for calling in consultants and referring patients, diffuse information as to the care of patients awaiting favorable times for operation, and so train the general man as to enable him to safely care for the needs of a larger and larger proportion of his patients.

"Our Very Noble and Approved Good Masters"

Some months ago that genial and wise philosopher of *Collier's*, Uncle Henry, remarked to Mr. Stubbs: "Lonzo, off-hand you'd say they want intelligent men on juries; but they don't. Why, if it wasn't for the scandal, 'Lonzo, they'd

have United States Senators on juries." Let all Tarheels join in giving thanks that Uncle Henry had not heard of that august body, the Legislature of the State of North Carolina.

By consulting Cumulative Statutes, 1925, chapter 296, section 2, one may find:

"Certificates (as to physical condition, required for issuance of marriage license) executed by what physicians."

"Such certificate shall be executed by some reputable physician licensed to practice medicine and surgery in the State of North Carolina, whose duty it shall be to *examine such applicants and issue such certificates without charge.*"

Read it again; it's good reading; and, besides, it is doubtless the only scrap of evidence on the face of the globe of an

effort on the part of a State to compel a man to buy a license in order to qualify himself to be compelled to work for nothing.

Of course no doctor, who, on a mental test, would grade much higher than the makers of this law, will think for a moment that it can be enforced; but it does favor the creation of ill-feeling between candidates for matrimony and "reputable physicians duly licensed to practice medicine and surgery in North Carolina;" and, as an illustration of the eagerness of a law-making body to forcibly impose burdens on a profession whose members already willingly bear them in number far out of proportion to any other group of men, and for crass stupidity,—it takes the cake.

DEPARTMENTS

UROLOGY

HAMILTON W. McKAY, M.D., *Editor*
Charlotte

Outline of Plan on Which This Department Will be Conducted

In assuming the responsibility of editorship of the department of Urology of Southern Medicine and Surgery I will endeavor to place emphasis on the various phases of genito-urinary work generally done by all doctors, either to render first aid to the patient as in cases of acute retention of urine, extravasation of urine, ruptured urethra, ruptured kidney, kidney colic or in that group of cases all physicians either treat themselves or are consulted about. I refer to the great and ever present venereal group of cases.

I believe it is generally admitted by genito-urinary surgeons that the diagnosis, pathology and proper management of venereals is a subject upon which little emphasis is laid in our great medical schools of today, and the teach-

ing of which is inexcusably poor. To illustrate, what does the average graduate in medicine after he finishes his hospital internship and is ready to begin practice know about the minute anatomy, histology and physiology of the sexual organs of the male? The young doctor knows little about the action or habits of the gonococcus, spirocheta pallida, or the bacillus of Ducrey when they enter the body.

Probably one of the first pay patients the young physician has is some college friend or former acquaintance who either does not fancy the publicity of consulting a specialist or is ashamed to go to his best friend, the family physician. "Jim", as we will call our young patient of 18 years is almost frantic. He has exposed himself 4 or 5 days ago; he has a little burning at the external urinary meatus; the lips of the meatus are stuck together as if with glue, he thinks he sees a urethral discharge when he breaks the "seal" but he is not sure. The boy can think of but one thing,—his penis; it

burns and itches all the time; his "buddy" on the street, aged 20, tells him that when he had the "clap" it did not act that way. He knows he cannot stand the mental anguish longer so he decides to slip around to see his friend, the young new "Doc," who has just come to town. The case is one where a smear will not help in a diagnosis. What course will the doctor pursue?

This department of Urology will be devoted to the discussion of practical phases of genito-urinary conditions that every doctor should know and be interested in. It will not be written or interesting to the specialist, but we hope to interest and help the large majority of readers of Southern Medicine and Surgery. A discussion of the following topics will appear in these columns:

1. The Diagnosis of Subacute and Chronic Gonorrhea;
2. The Diagnosis and Management of Acute Prostatitis (Prostatic Abscess);
3. Gonorrhoeal Epididymitis, its Management;
4. The Diagnosis and Management of Penile Sores;
5. The Management of Acute Gonorrhoea;
6. Acute Retention of Urine, its Management;
7. Stricture of Small Calibre, its Management;
8. Extravasation of Urine, Diagnosis and Dangers;
9. Rupture of the Urethra, Diagnosis;
10. The Danger of Trauma of the Urinary Tract;
11. Hematuria, its Significance, as a Symptom.

I shall adopt the following as a slogan for this department: "What every doctor should know about genito-urinary diseases."

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

Capital Punishment

I object to capital punishment. My opposition to it is of long-standing, and the personal objection becomes more emphatic and more profound as the years pass.

There can be no more than two reasons why the State in cold deliberation should set in motion the power of its machinery to rob one of its citizens of his life. The destruction of the citizen's life must be either for his own good or for the welfare of the State.* I am unwilling to believe that anyone would attempt to prove that it would be better for a citizen himself to be killed than to be permitted to continue to live, regardless of the nature of his conduct. I assume that the State ascribes to itself some virtue in every act that the State contemplates or carries out. Is there virtue in the State's killing one of its citizens? In what does the virtue consist? Is the civilization of the State thereby pushed forward? By such behavior on the part of the State am I made a better citizen? Are you? Is your neighbor? Is anybody else? Who? The State's killing of a human being by legal process demonstrates the truth of one thing, and one only. The life-taking procedure proves beyond any doubt that the State is mightier than any single one of its citizens. The State has the omniscience and the omnipotence necessary to bring about the slaughter of one of its own members. So-called capital punishment meted out by the State is conclusive proof of that fact. Is it proof of any other fact? What?

All of the work of the State should be beneficent in purpose. Virtue must be the motivating factor, at least, in each act of the State. What inherent virtue can lie in the State's killing a member of its own social structure? Does the process of electrocution of a prisoner bring punishment to him? In what manner? Does the cessation of life cause punishment? Death induced by

electrocution is said to be painless. The electric current reaches and kills the pain-receiving centers before the pain-sensation arrives there. Both physiologists and physiologists tell us so. Then electrocution does the prisoner no painful damage; it causes him no harm, indeed, in the sense that it inflicts upon him no physical pain. But the criminal's life is forfeited. To whom? To what? Who gets the prisoner's life? Not the State? Not the person the prisoner has slain? Not the slain's family. We read that the State takes the condemned man's life. What does the State do with that life? Use it in any way? For what purpose? Some beneficence? No, the electrocuted man is lost—to himself, to the State, to all the world. So far as the State has been able to destroy, it has destroyed utterly a human life; thrown it away. Is there virtue in such complete destruction? In what does such virtue consist? Has the State or its people been benefitted by having taken the life of a prisoner? Benefitted in what way?

Most of the activities of organized society are conserving. Civic and political agencies tenderly care for mindless children, even where there can be no hope of bringing them to any higher mental level; the State cares for the insane, for some of the physical cripples, for some of the tuberculous, for the blind, for the deaf; the State cares for hogs, sheep, cattle, horses, dogs, birds, fishes, oysters, wild animals, cotton, corn, grass, trees, streams, roads, buildings; the State cares for all other prisoners save those condemned to be killed by the State. Here the conservation program stops. Here, and here only, it wilfully and deliberately and solemnly kills. At an early age the little child, ignorant and relatively helpless, is taken by the State and educated and trained into good citizenship. For what purpose? For the good of the child? For the welfare of the State? Here the State is making an investment in citizenship. The process is conserving. Against the capital prisoner only is the

State destructive. Is the procedure rational?

In an open assemblage of the law-making body crimes considered worthy of death are catalogued. In such an assemblage, open always to the public, the punishment is designated proper for each such crime. In open court the citizen is tried; by and before his fellow-citizens the prisoner is convicted; there before his fellows, in wide-open assemblage, sentence of death is passed upon the prisoner. He is told by the court in the full presence of the public why and when and in what way he shall die. He is told that he is to be killed as a lesson to his neighbors that they may not follow in his wayward footsteps. The prisoner is sent to the death cell. There he awaits in solemn isolation the day on which the medication is to be administered. But if it be for the good of the people of the State that the prisoner be killed would it not be well and proper for the people to witness the killing? If the killing be deterrent in purpose would not such purpose be more certainly served if the people could witness each electrocution? Why are the people denied such a beneficent sight? Why is such potent civic therapy given in secret? Why are the public excluded? In Virginia why are the papers legally forbidden to publish an account of an electrocution? Why should such things be in a State which boasts of freedom of the press? Why? Because the State is engaged in the practice of a social and civic therapy of such a sort that it is unwilling, nay more, perhaps, afraid, to permit the people to witness the personal application of such a penalty. The whole business has the sound of quackery.

Modern medicine allows no such practice of medicine. Do reputable physicians medicate their patients in secret, at early dawn, while the world is still asleep? Hardly. Medicated ointment was once applied as a curative agent to the bumps on the skin of a smallpox patient. Now smallpox is prevented. Typhoid fever was once treated by the application of cold to the body, and by the

administration of drugs, and many patients died. Now the disease is prevented by sanitation and by preventive hypodermics. Malaria was once treated by quinine; now it is prevented by destruction of the mosquito. Insane persons were once abused and derided and maltreated as the accursed of God; now they are known to be sick in their minds.

Does the infliction of the death penalty deter others from committing capital crimes? How can one know? Within a week after the electrocution of a white youth in Virginia's penitentiary another white youth was in prison charged with having killed an old man within a half-mile of the first white youth's triple killings. Capital punishment deters from the commission of capital crimes to about the same extent that prohibition prevents the drinking of whisky—not at all; to about the same extent that the anti-narcotic law prevents people from using what opium they desire to use—not at all. And if it deter in any degree the criminally inclined to hear in vague fashion that a murderer has been electrocuted, it should certainly prove much more deterring for those same criminally inclined individuals to witness electrocutions with their own eyes and to read about the application of the State's solemn social therapy. But in Virginia the law makes it impossible for the citizenship either to witness an electrocution or to read about it. Why?

The desire for the infliction of capital punishment arises out of the feeling of revenge in the people. The criminal has struck a blow; a blow alike in quality and equal in force must be struck back. And so the killings go steadily along; by the criminal on one side, by the State on the other. What progress is being made?

In many countries the death penalty is no longer in use. Italy long ago abolished capital punishment, so did Holland, and so have many states in our own Union. We do not think of Italy as a specially enlightened nation, but murders are not common in that country.

Capital punishment is wrong. If it

be wrong for an individual to kill it is infinitely more wrong for a group of individuals—the State—to kill. Electrocution is lynch law legalized. It brings the State down to a lower plane than that of the criminal whom it kills. It is barbaric, out of time, unnecessary, wrong, a confession of civic impotence to deal with a grave problem. It is the State's exhibition of failure in a crisis. It is cowardly, because the many are arrayed against the one. Intelligence is arrayed against ignorance, strength against weakness. The State's people are brutalized by it. I have less respect for my State each time it kills one of its citizens. Killing of a human being is murder and murder is accursed of God.

DENTISTRY

W. M. ROBEY, D.D.S., *Editor*

Charlotte

Commercializing the Professions.

It is true, the world, our world, America, "has turned the corner."

Doctor, how much money did you receive for services last year? How much money did you pay out, that you might receive that amount? Your answer is your net income, plus some several arbitrary amounts claimed by the tax gatherers as investments, luxuries, etc., although you could not have had them had you been occupied with any other calling.

The ladies who just called in the interest of a laudable charity were not disappointed, for the reputation for charity is not undeserved.

Community service grows day by day and it is the duty of those who can to help those who cannot.

The new hotel must be financed by the community, to help the community, as capital goes into investments that pay. The hotel is not expected to pay directly.

The hospital naturally falls to the lot of the doctor. Business men are not interested as they know hospital stock is not supposed to pay.

The list continues down to the college

boy wanting "votes" to go to college. The professions are such notoriously easy marks that a part of each day, no matter how crowded, is spent interviewing would-be commercializers of the professional net income.

But it is very appropriate that doctors and dentists play the part of philanthropists. They should pay their taxes, especially the license, as that is probably their most certain contribution to the government.

This license has passed from the nominal to a real revenue producing tax on a business, so interpreted by our law-makers.

The old order of serving humanity without regard to cost is gradually passing, in spite of the struggles of the great hearts that would have it otherwise. The professions can not serve two masters.

Commercialization in a profession is wrong, all wrong, a disaster! But law, education, necessity, are all pushing all professions over the barriers. Idealisms are being adopted by the classes and the masses. The professional idealist is sidetracked and left by the wayside. For who can preach and heal and help the poor and weak and suffering with ideals and dreams?

The income must come, or no education, no equipment, no post graduate work, no clinics, no licenses, no taxes, no nothing. What is commercialization?

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

The North Carolina Orthopedic Hospital

About sixteen years ago, Robert B. Babington, a citizen of Gastonia, North Carolina, learned that child-caring institutions reluctantly received children who were physically handicapped. At the time, Mr. Babington was trying to interest an orphanage in admitting a crippled child. The child was refused admission, because of some physical deformity. This experience caused Mr. Babington to, at once, initiate a move-

ment to build in this State a haven of some type for orphaned and destitute crippled children. At first the plan in mind was principally the schooling of these unfortunates; but, as the scheme developed, and the author became acquainted with what was being done, surgically, for cripples, he became intensely interested in making a real hospital of this proposed institution.

The problem was how to get it financed. The movement was begun very modestly by getting a penny here, a dollar there, and a promise elsewhere. This continued several years until a fund of \$20,000.00 was accumulated. By this time, Mr. Babington had preached the idea throughout the State and the legislature was approached for help. The legislature matched the \$20,000.00, and \$40,000.00 was in hand. Then began a further campaign, for funds, lasting over the next two years, when another sum of \$20,000.00 was raised, which sum the legislature again matched and the grand sum of \$80,000.00 was available. With this in sight, a suitable location was selected just east of Gastonia and construction of buildings begun. The corner-stone was laid June 8, 1920.

Much should be said in commendation of Mr. Babington, a layman, who, during these years, kept tirelessly at a medical and surgical problem for the benefit of his people. There were naturally many discouragements. He visited hospitals here and there, and corresponded with others. He subscribed to medical publications and pushed the movement for this hospital in every way known to him. He adopted a slogan, "Foy Est Tout"—faith is everything—and worked with this as his only support at times. About one-half of the hospital was finished in 1920, when the funds were exhausted. By this time, the Shriners were building similar hospitals in various parts of the country and the idea was before the people to a degree that assured the future development of this institution. When the hospital program was presented to the legislature in the winter of 1921,

that body appropriated an additional \$100,000.00 for further construction, and a fund for maintenance during the following two years.

On July 1, 1921, the first patients were admitted. At this time only one ward could be occupied and it was soon filled. The capacity of the hospital then in the building was sixty beds. Though patients were admitted and the institution operated, full capacity could not be reached until 1923, after another legislature had increased the budget to meet the necessary maintenance expenses entailed. Since that time, the hospital has operated its capacity, and more.

The institution is governed by a board of trustees from the State at large. They are appointed by the Governor, two every second year, and serve a term of six years. These gentlemen (and one lady) take a keen interest in the work.

The nursing work is done by supervising graduate nurses and nursing aides. A training school, formerly run, was abandoned because of the limited teaching facilities in a special hospital.

The service of the hospital is free and is offered to children of indigent parents. The present age limit is sixteen years. An out-patient clinic is held each Tuesday at two o'clock at the hospital. Occasionally, survey or diagnostic clinics are held in different parts of the State, but treatment is not undertaken away from the hospital. Time and hospital management are important elements contributing to good end-results in the treatment of most cases.

There is more latitude to the interpretation of indigency in orthopedic work than in any other branch of medicine, unless it is mental diseases. The average stay of a child at the Orthopedic Hospital is seventy-four days. It should be longer, but the demand for beds pushes the turnover. The average man might be able to pay for the removal of tonsils for all of his children, an occasional appendix operation, or any average condition calling for a short hospital stay and the services of a private physician or surgeon, but that same

man trying to have his child's tubercular joint, paralytic limbs, or late club foot cared for under the same circumstances would be economically ruined if he paid the bills, or even a reasonable part of them in many cases. So a large mass of people come in the scope of the service of this hospital as it is now operated.

To date, the service of the hospital has been tendered in some way to over two thousand children. It is well known that the follow-up work is highly important in this field of surgery. It is surprising how well the children have been returned for observation, when requested, in the light of the distances necessarily traveled across this great State. Some of this is due to the contact of the hospital with the patient and the family, and some of it is due to the co-operation of doctors and social agencies throughout the State. While children are in the hospital, every effort is made to give them the benefit of modern hospital and surgical care, including a great deal of routine laboratory work. The hospital operates a day school, a vocational school, and a corrective gymnasium.

While this institution has been struggling in a way to take its proper place in the State, some kind friends have come to its aid. The sponsors of the work feel grateful that the hospital, in its short life, should have so favorably impressed the late Mr. E. D. Latta, of Charlotte and Asheville, as to prompt him to leave it a substantial bequest in his will. This was soon followed by a substantial donation from Mr. Ben Duke, for the erection of a twenty bed colored ward, and now it is encouraging to anticipate the possibility of additional aid from the Hospital Division of the Duke Endowment. This is part of a dream in the New South that many of our institutions may be passing from the limitations imposed by poverty to a new height of independent usefulness, through the philanthropy of our citizenry.

It is the hope and expectation that the fruit of this great idea conceived by

Mr. Mr. Baxington sixteen years ago, may grow to be a highly useful centre of orthopedic surgery in this State, and that it may be conducted professionally in a way to reflect credit on medicine and surgery in the South.

EAR, EYE, NOSE AND THROAT

HENRY L. SLOAN, M.D., *Editor*
Charlotte

Sympathetic Ophthalmia.

This disease is rare. Yet the oculist should never be forgetful of the danger of it in the treatment of eyes which have suffered penetrating wounds of the globe. It is brought to my mind by a recent experience with the case of a small boy who had a perforating wound at the corneo-scleral junction involving the ciliary body. I saw this boy for the first time three months after the injury. The wound had healed, leaving a shrunken globe with a secluded pupil, with ciliary tenderness and mild ciliary injection. Three days before consulting me the other eye became red, and the vision blurred. This eye showed ciliary injection, ciliary tenderness, a marked plastic iridocyclitis with a totally secluded pupil and bulging iris and punctate deposits on Descemet's membrane.

The injured eye was without light perception and immediate enucleation was advised and done. Enucleation had better not been done had there been useful vision in the injured eye, as the "exciting eye" under such conditions may recover with better vision than the sympathizing eye.

The proper step here would have been early enucleation of the injured eye as soon as it was discovered that hope of saving it was gone. An eye the seat of such injury should be promptly removed as a prophylactic measure. This may seem too well known to mention. However, so many sad results frequently occur from neglect to heed this advice that frequent repetition is necessary. I have seen in recent years four cases of sympathetic disease with complete loss of vision because of similar

neglect. This is so important that every physician should constantly bear this fact in mind.

Every case of perforating injury of the eyeball should have the advice and care of a competent oculist. Much can be done by the proper attention to the injured eye as soon as possible after the accident. The wound should be carefully cleansed with 1:4000 solution of bichloride, and the edges of the wound penciled with five per cent iodine. All tags of iris, uveal pigment, and lens capsule should be carefully removed from the wound. The wound should be closed, if in the sclera, with sterile catgut or silk sutures, being careful to avoid injury to the choroid, and the conjunctiva closed over this. Limbal wounds should be treated by conjunctival flaps. As stated above, the injured eye should be removed if the globe is badly wounded and all vision is destroyed.

Intraocular foreign bodies should be removed. In the case it is steel or iron, magnet extraction, after x-ray localization, can be done without great effort in the majority of cases. Lead, copper and glass cannot so easily be removed, as they are non-magnetic. If impossible, as is true in the majority of such cases, the eye with the intraocular foreign body must be removed. I recall one case of a colored girl who was hopelessly blind from sympathetic ophthalmia, resulting from a small lead shot in the vitreous, of eight weeks duration.

Sympathetic ophthalmia rarely develops earlier than two weeks after injury to an eye. It has been known in two cases to develop as early as the fourth day. It is to be feared, according to de Schweinitz, during the first twelve weeks, especially between the sixth and twelfth weeks. It is rare after four months. It has been known to occur as late as forty years afterwards. It would seem, then, that the atrophic eyeball, which shows slight ciliary injection and tenderness, and which is without useful vision, remains potentially always a danger. Such an

eye should be enucleated whenever seen.

Tieri, D. (Archives di. Ottal., v. 27, 1920 p. p. 190-211.) sums up civil and military statistics, including some of his own, on the occurrence of sympathetic ophthalmia. In the war of 1870, it was stated that fifty-five per cent of the ocular wounds produced sympathetic ophthalmia. According to Hobby, in civil practice, it occurs in 11.6 per cent of ocular wounds. The great war was marked by the occurrence of very few cases of sympathetic ophthalmia. Morax was able to collect only thirty-nine cases occurring in the French army, and Schevensteen saw only two cases in the Belgian army. Morax believes that this low figure was due to early enucleation, which was done in most cases.

De Schweinitz, in the 10th edition of his text book of "Diseases of the Eye," states that it was uncommon in the world war, as compared with its frequently reported occurrence in our civil war and in the Franco-Prussian war (1870). "Four factors were potent," he states, "in reducing to a gratifying minimum the incidence of sympathetic ophthalmia; (1) accurate recognition of eyes so injured and inflamed that they should be sentenced to prompt excision; (2) proper early treatment of injured eyes; (3) the healthy general condition of most of the soldiers; (4) abstinence from unnecessary minor operations."

From a summary—Ophthalmic Year Book, Vol. 18, No. 2, June, 1922.

INTERNAL MEDICINE

PAUL H. RINGER, S.B., M.D., *Editor*
Asheville

What is Internal Medicine?

It is admitted that the surgeon should have special hospital training, that the radiologist must have extensive equipment, that the nose and throat man must have taken post-graduate work to fit him for his specialty, that the pediatricist must be specially versed in infant feeding and hygiene, but almost any one is supposed to be able to prac-

tice "internal medicine."

What after all is internal medicine? Internal medicine is the recognition of diseased conditions in the human body, the correct location of the lesion, the determination of its character and extent, unless its very recognition obviously allocates it to one of the definite "specialties," and the treatment of all non-surgical conditions whether acute or chronic that fall in the realm of "general" rather than "special" work.

There is no doubt that specialism is overdone just as there is no doubt that a reasonable amount of specialism is absolutely essential. But the idea that any one can practice internal medicine without continuous study is wholly wrong. The internist faces many problems not encountered by the specialist. In the first place he must have a working knowledge of the physiology of the various systems of the human body and of their interdependence. He must be aware of the pathological conditions occurring in the various organs of the body and of the effects of these pathological conditions upon other organs whether contiguous or distant. He must be able to visualize the patient's condition as a whole, and, if he is careful and thorough in his work, he must in the majority of cases make several diagnoses in the same patient, for it is rare that an individual presents himself suffering from one complaint and one only.

The internist need not be proficient in laboratory technique, but he should have a well-equipped clinical laboratory connected with his office, in charge of a reliable technician, and he should be fully qualified to evaluate the clinical worth of laboratory findings as reported to him. The internist should know the value and the imperfections of radiological examinations of the chest and of the gastro-intestinal tract and should familiarize himself with plate-reading. It is far more important for him to be able to correctly estimate the value of a heart or chest or intestinal plate than it is for him to be able to go through

the technique of estimating blood-sugar.

The man practicing internal medicine should be competent and willing to treat the ordinary diseases of the circulatory, respiratory, gastro-intestinal and renal systems as well as those disturbances of metabolism most frequently met with. Why should not the same man handle and handle well cases of angina pectoris, gastric ulcer, pneumonia and diabetes? In difficult cases a consultant, better versed in the minutiae of the disorder in question, will be called and information gained from his more specialized knowledge, but the individual who aspires to practice internal medicine should in the main treat his cases.

It is probably inevitable, but it is none the less regrettable that in the past ten or fifteen years many excellent men have taken the position of "diagnosticians" and of that alone. The very name leads to two fallacious inferences: first, that the average man cannot (or does not) make an accurate diagnosis, and second, that when an accurate diagnosis is reached, any man can successfully treat the patient. Both these inferences are false. The average earnest, careful physician can make a correct diagnosis in the majority of cases, and all the work in connection with getting the patient well is by no means over when the diagnosis is made. The "diagnostician" lessens his own usefulness to the community by not seeing the patient after having reached his conclusions as to the nature of the malady, and does not increase his therapeutic skill by writing orders for the "general management" of the case. This state of things is not the fault of the diagnostician alone. It is largely due to the fact that men throughout the country are not studying cases with sufficient care and are taking the easiest road by referring them to A or B in the nearest large city or town. A and B thereby acquire the reputation (and rightly so) of being diagnosticians and of course cannot treat the patients sent them but must of necessity return them whence they came. So-called "diagnostic surveys"

are overdone and they are overdone because the profession at large is not giving enough care to the primary investigation of the patient.

It is a statistical fact that eighty-five per cent of human ailments can be correctly diagnosed and adequately treated without resort to expensive and difficult laboratory procedures and radiological examinations of the entire body. It is a fact that internal medicine can be adequately practiced without the presence of the electrocardiograph and the metabolism room; *but* it is also a fact that internal medicine *cannot* be adequately practiced in the absence of painstaking study of the history of the patient, careful physical examination, and such clinical laboratory procedures as are within the reach of every physician in a town of over 20,000 inhabitants and within the reach of every *group* of physicians in the rural districts if these physicians will band themselves together for their common good and for that of their patients.

Internal medicine is the very marrow of the profession. Its practice by physicians in general is essential unless the growth of specialism is to progress to such an extent that we will eventually all be doing "piece-work." Internal medicine is broadening and deepening—an inspiration to the physician, a boon to the patient.

THE SECOND DISTRICT DENTAL SOCIETY OF NORTH CAROLINA held its annual meeting in Charlotte March 8th and 9th. Features of the meeting were addresses by Dr. H. O. Lineberger, President of the State Society; Dr. Horace M. Davis, a member of the faculty of the University of Maryland, and Dr. R. D. Thornton, of the School of Dentistry of the Medical College of Virginia.

Drs. Joseph A. Elliott and Harold C. Shirley of the Charlotte medical profession were invited guests who discussed subjects of interest to both professions. Dr. J. M. Holland, of Statesville, was succeeded in the presidency by Dr. S. B. Bivens, of Charlotte, and Elkin chosen as the next place of meeting.

BUSINESS SESSION
TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS
AND VIRGINIA

Wednesday, February 17, 1926, 2:55 P. M.

ELECTION OF OFFICERS

The President called for nominations for the presidency.

Dr. J. T. Burrus, High Point, N. C.: Some time ago I had a letter from a man who is deeply interested in the great success of the Tri-State Medical Association. This emanated from one of the truest hearts that beat, and its thought was only to better the association. He asked, "What can we do to make it better?" The reply was that, to me, it is one of the finest associations about which I know anything, and in North Carolina I think it is the only real, honest-to-God association that we have the opportunity of attending, unless it is the Guilford County Medical Society. (Laughter). Now, I believe that service stands out pre-eminently above everything else, and it is, in a way, to repay partially for service that I wish to present the name of a gentleman who has made bare his arm to serve this association upon all and every occasion. In 1898, when this society was organized, he was there, and, except when providentially hindered, he has attended all the meetings. No man has contributed more to scientific medicine in North Carolina than he; no man has led a life that the younger doctor could better emulate than he. Service has been his motto, not only to this society but to the profession at large, and to his patrons. I could go on for a long time and tell you of many things, lots of things that we and that you know, but suffice it to say that all of us recognize the service that this gentleman has rendered this association. We are now at a period, we are now approaching a day, when to carry on is necessary, and I know of no man that is more capable or willing to carry on than he. It gives me great pleasure to nominate for president of this association for the next year Dr. A. J. Crowell, of Charlotte.

Dr. F. H. McLeod, Florence, S. C.: It gives me a great deal of pleasure to second the nomination of Dr. Crowell.

Dr. J. Allison Hodges, Richmond, Va.: As a representative of Virginia, I assure you that it gives us in that state great pleasure to emphasize the work that has been done by this consistent member through many years in building up and doing his part in making this society a feature in the South and in the nation. I wish to say that a long time ago, when Dr. Crowell was more or less a struggling physician, it was my pleasure to see the motives that actuated him in his service toward his patrons, and later in that same service which he gave to his profession, and I wish to say that I have never known a man that, starting, as he started, with little, has made greater strides than he has, and who has served his profession more conscientiously, more honestly, and more scientifically than he has done. Next year we shall meet in South Carolina. There is but one regret to me, and that has been that the gallant state of South Carolina has not come to our rescue with its accustomed alacrity, and has not come to our rescue professionally, as it is well fitted to do, and I believe Dr. Crowell, living, as he does, on the boundary, can be of benefit in interesting and inciting these members to come to us. Lastly I have this in mind, that he can give us a specific aim, a definite trend of professional work for this association, for which it is well fitted, and has never yet exactly filled. So I believe that Dr. Crowell, situated as he is in the magnificent city of Charlotte, surrounded by professional brothers of renown, can bring such a service to this association as it has never had. I believe if we give this honor to Dr. Crowell this society will continue to increase, and will repeat what it has done at this session, a session of hard, earnest, scien-

tific work that is for the benefit of the profession as well as for the benefit of the public.

Dr. Charles O'H. Laughinghouse, Greenville, N. C.: To be president of such an organization is an honor, and it is one that should be awarded for service. I do not know of any man that has been of more service in the three states than Dr. Crowell. When I think of the clinic started by Dr. Crowell, that has been of great service not only in this state but in the neighboring states; when I think of the young men he has gathered about him, fine and strong; when I realize their loyalty to him, I know that that clinic is controlled only by a man of strong parts and splendid characteristics. I believe that Dr. Crowell can take the Tri-State Medical Association, as good as it is, and make it better. For that reason, as a representative of North Carolina, it gives me a great deal of pleasure to second his nomination.

Dr. H. R. Black, Spartanburg, S. C.: I am very sorry, and I regret very much indeed, that South Carolina is lagging behind in this association. Just why, I do not know; just why, I cannot understand; but I think in the future perhaps we may do better. I was surprised the other day when I looked over the program and found there was only one paper to come from the old Palmetto State. Usually she is on time; in time of war and in time of peace you can always rely on South Carolina, but in this particular instance she has fallen far short of her duty. I promise you, Mr. President and gentlemen, and I promise Dr. Crowell, that next year, wherever this association may go—I suppose it will go to Columbia; it ought to go to Spartanburg, because Spartanburg is a better town than Columbia—I am going to promise you and I am going to tell all of you gentlemen that there is one little set of workers down in South Carolina who, if they are living next year, will be in Columbia in full force and will do their duty in this association. I represent that little band of workers down in Spartanburg. We

shall be glad to have you stop at any time and see the work we are doing. We shall try to do our part in this association in the future. Personally I am a little bashful and do not like to get into the limelight, and therefore you have not seen as much of us as we would like, but we are going to take the forefront in South Carolina, if it is necessary, to support this association as it should be supported. (Applause). Knowing this young man on my left as I have for a good many years, I am sure this association could not do better than to elect him as its head, which it is going to do. I have known Dr. Crowell personally, and have known him professionally. We have sent him patients when in deep water, and he has always been kind to us and has helped us out. It therefore gives me great pleasure to second Dr. Crowell's nomination.

It was moved that the nominations be closed and that the Secretary cast the unanimous vote of the association for Dr. Crowell. Motion seconded and carried.

Dr. James K. Hall, Secretary-Treasurer: Mr. President, it gives me the most infinite and exquisite pleasure to cast the unanimous ballot of this association for my friend, Dr. Andrew Johnson Crowell, of Charlotte, North Carolina.

ELECTION OF VICE-PRESIDENTS

Dr. J. P. Munroe, Charlotte, N. C., nominated Dr. Seavy Highsmith, of Fayetteville, N. C. Seconded by Dr. Charles O'H. Laughinghouse, Greenville, N. C. Motion that the nominations be closed and that the Secretary cast the unanimous ballot of the association for Dr. Highsmith. Seconded and carried.

Dr. W. P. Timmerman, Batesburg, S. C., nominated Dr. H. S. Black, of Spartanburg, S. C. Seconded. Motion that the nominations be closed and that the Secretary cast the unanimous ballot of the association for Dr. Black. Seconded and carried.

Dr. J. Allison Hodges, Richmond, Va.: I rise to nominate a gentleman from Virginia who has been very con-

stant in his attendance upon the meetings of this society, and I believe that men who show their love for it by their interest and by their work should be elected to office. But I want to nominate him for another reason, and I believe the members of this society should pay a tribute to a man who has worked day and night for the last several months, and especially for the last six weeks in the legislature, to kill the chiropractic bill. This is Dr. L. T. Price, of Richmond. I should be glad for you to speak with stentorian voice in behalf of the man who has fought so valiantly against the class that is trying to dominate our profession in the Old Dominion. (Applause).

Dr. J. P. Munroe, Charlotte, N. C.: It gives me great pleasure to second the nomination of Dr. Price. He gave us a very valuable paper, and is a very valuable member.

Dr. A. L. Gray, Richmond, Va.: I wish to second the nomination of Dr. Price, not only for the work he has done, and because of his recent successful fight against the chiropractors, but especially for the work he has done in the city of Richmond. Dr. Hodges failed to mention the part he has taken with Dr. Price. These two gentlemen have fought the chiropractors of Richmond who were practicing illegally, and have succeeded in preventing them from practicing or acquiring a license to practice in the city of Richmond without securing license from our State Board of Medical Examiners. I move that the nominations for the vice-president for Virginia be closed, and that the Secretary cast the unanimous ballot of the association for Dr. Price. Motion seconded and carried.

Dr. James K. Hall, Secretary-Treasurer: I love Dr. Price, but I pray a merciful God that I may never be brought under his medical care. (Laughter). In spite of that fact, it gives me pleasure to give my own vote and that of the body for him.

ELECTION OF SECRETARY-TREASURER

Dr. A. L. Gray, Richmond, Va.: I get on my feet again to nominate the

best secretary this country has ever afforded. I wish to nominate one Dr. James K. Hall, who represents not only the grand old state of North Carolina, but the state of Virginia as well. I can not say too much for Hall; I don't think anybody need say anything for him. His efforts speak for themselves.

Dr. H. R. Black, Spartanburg, S. C.: I wish to amend that nomination and to make it a perpetual nomination. (Laughter). It gives me great pleasure to second this nomination. Dr. Hall is the very best secretary-treasurer in the country. He is willing to serve, or at least I think he is, and his service has been so valuable to this association that I think we ought to keep him. We do not want to overwork him, but we want to keep him on the job.

Dr. J. P. Munroe, Charlotte, N. C.: I am really sorry for the men who are to take the reins of government in this society for the coming year, for you have a job on your hands, Dr. Crowell, and whoever is to be your secretary. It is going to be a hard job ever to come up to the standard attained this year; it is going to be a difficult, if not an impossible thing, to get a set of papers of equal ability with those presented yesterday and today; it is going to be hard to find anybody in the executive chair and the secretary's chair who will run the meetings more smoothly, so that we meet on time and adjourn on time. As a Charlotte man, I want to thank you for the honor you have done Dr. Crowell, but I don't believe I should be willing for him to serve unless he were going to have the valuable services of our present secretary, Dr. Hall. I move, therefore, that the nominations be closed.

Dr. J. E. S. Davidson, Charlotte, N. C., seconded the motion to close the nominations for secretary-treasurer, and moved to suspend the rules and elect Dr. Hall by a rising vote. This motion was seconded, and Dr. Hall was re-elected by a rising vote, with applause.

Dr. James K. Hall, Richmond, Va.: I want to say to you that it is a contin-

ual inspiration to me to work with you and to be associated with you, and hereafter I am going to try to do better.

Dr. J. P. Munroe, Charlotte, N. C.: My good friend, Dr. Hodges, has said something about the attendance and work, and I want to say this as a North Carolinian, and as one of the charter members—we are indebted more than I can say to the good men of Virginia. Look at our program. They not only came here, but they came to Spartanburg; they came to Charleston; they come wherever we meet. I want to express our deep gratitude to our brothers in Virginia for the loyal and unflinching way in which they stand by our society.

REPORT OF THE EXECUTIVE COUNCIL

Dr. James K. Hall, Secretary-Treasurer:

There have been ten resignations from the society within the past year.

If the audience will stand, I will read the names of the members who have died. (Read names).

There are 34 applications for membership, which were favorably passed upon last night.

There is a balance of \$1400 in the treasury, and most of the debts are paid.

Dr. Wyman and Dr. Pitt appeared before the Executive Council last night and extended an invitation for the association to meet in February, 1927, in Columbia, South Carolina. This invitation was presented through them by the Medical Society of South Carolina, the Chamber of Commerce, and by practically all of the other organizations in that city. An invitation was also extended publicly last night, you remember, by Governor McLeod of South Carolina. So, in addition to being invited to meet in Spartanburg, you are also invited very cordially to meet in Columbia.

I have telegrams from Dr. Cyrus Thompson, of Jacksonville, N. C., and Dr. R. E. Hughes, of Laurens, S. C., also one from Dr. L. G. Beall, and a card from Miami, Florida, from Dr. Tom A. Williams, which I should like to read. (Read).

The council fills its own vacancies.

Three men were automatically retired by the termination of their services, these being Dr. F. M. Hodges, Richmond; Dr. D. A. Stanton, High Point, and Dr. W. R. Wallace, Chester. In their stead the council elected Dr. Warren T. Vaughan, of Richmond; Dr. Douglas P. Murphy, of Rutherfordton, and Dr. M. H. Wyman, of Columbia.

The council recommends that the invitation to meet in Columbia be accepted.

On motion of Dr. H. S. Black, of Spartanburg, seconded by Dr. J. T. Burrus, of High Point, the recommendation of the council to meet in Columbia was adopted.

Dr. James K. Hall, Secretary-Treasurer:

I should like to be permitted to place before you a resolution in expression of the thanks of this body, individually and collectively, to the Cumberland County Medical Society for inviting us to meet in Fayetteville and for their kindly and considerate attention to us throughout the meeting; to Dr. Seavy Highsmith, the efficient chairman of the local committee on arrangements for his prompt and unflinching helpfulness; to Governor Angus Wilton McLean, of North Carolina, to Governor Thomas G. McLeod, of South Carolina, and to General A. J. Bowley, of Fort Bragg, and to Dr. Allan Craig, American College of Surgeons, Chicago, for their presence at the public session and their inspiring messages to the membership and to the public. We wish to extend our thanks to the city of Fayetteville for the use of the auditorium of the high school building for the public session; to the high school orchestra; to the young ladies and gentlemen who served as ushers; to Dr. J. Vance McGougan, who presided so admirably last night; to the Fayetteville Observer for its splendid reports of our meetings; to the Prince Charles Hotel; to the ladies of the entertainment committee for their cordial welcome and helpfulness to us; to Dr. R. L. Pittman and Mrs. Pittman for the hospitality of their home yesterday evening; to the United States

Weather Bureau for the splendid weather; and to ourselves I wish to extend our hearty congratulations upon this meeting. I should like to add to that that our thanks be extended also to Mr. Ponton, of the Broadway Theatre, for the loan of his operator, Mr. Fletcher, who took care of the movie machine last night so very efficiently.

Dr. Hodges: I second the motion to adopt the resolutions, and in the name of the people of Fayetteville I wish to second this splendid resolution of appreciation. I know that they would be glad to have you come again to this Scotch-Irish settlement and live with them the life they know so well how to lead.

Dr. Timmerman: I move that the Secretary be instructed to reply to the telegrams of Dr. Hughes and Dr. Thompson, and especially ask Dr. Thompson to come to the meeting in Columbia, because if he comes there and the South Carolinians hear him, you will never be able to keep them away from a meeting thereafter. Motion seconded and carried.

The President asked Dr. McLeod and Dr. Munroe to conduct the new presidency to the chair.

Dr. A. J. Crowell, incoming president: Gentlemen, I assure you that I have not, and could not find, words to express my

appreciation of this honor. It has been well said that it is really a great thing to be president of this association. It has also been said, and I heartily endorse it, that this association is composed of the cream of the medical men in the three states. Therefore the holding of its presidency is bound to be an honor, and a man would not have gratitude in his heart if he did not feel it to be an honor, and if he did not feel greatly humiliated, in a sense. You make me feel awfully little. When I think of the roster of men who have preceded me, I know how utterly I have failed, as compared with them, when it comes to ability to preside over such a distinguished body. No one knows his weakness better than I know mine. I solicit your hearty co-operation, and beg of you to overlook my mistakes. I shall make them, but they will be mistakes of judgment and not of the heart. I solicit your constructive criticisms and suggestions. I promise you that I will do my best to hold up the standard insofar as it is possible for me, in my weakness, as the presiding officer of this association. You can help me greatly, and I am quite sure you will. I again thank you, and feel so unworthy the honored position in which you have placed me. (Applause).

(End of business session).

CORRESPONDENCE

Charlotte, N. C., March 10, 1926.
Dr. James M. Northington, Editor,
Southern Medicine and Surgery,
Charlotte, N. C.
Dear Dr. Northington:

I greatly regret that the work necessary in connection with the presidency of the Tri-State Medical Association, as well as assumed responsibilities relative to the trip to Europe this summer of the Inter-State Clinic Assemblies of North American Physicians, makes it necessary that I tender you my resignation

as Editor of the Department of Urology in Southern Medicine and Surgery.

Our relations have been most pleasant and to me profitable. I hope that my successor, whoever he may be, will make great improvement in the Department.

It will give me pleasure to contribute articles to this Department from time to time and to cooperate in every way to make the Journal a continued success.

Yours very truly,

A. J. Crowell.

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NEWS ITEMS

DRS. WM. DEB. MACNIDER, CHARLES L. MINOR AND J. HOWELL WAY were the the three North Carolinians on whom was conferred the honor of election to fellowship in the American College of Physicians, at the Detroit meeting in February.

DR. L. D. MCPHAIL has returned from New York where he has been pursuing a course in Proctology. He has taken over the practice of the late Dr. R. Z. Linney and is now occupying Dr. Linney's former offices in the Commercial National Bank Building.

DR. J. RUSH SHULL has recently been appointed Roentgenologist to St. Peters Hospital, Charlotte, N. C.

DRS. J. L. MCCABE AND THOMAS J. HOLTON announce the opening of offices 709-710 Independence Building, Charlotte, N. C., for the diagnosis and treatment of diseases of the eye, ear, nose and throat.

DR. TOM A. WILLIAMS has moved from Washington, D. C., to Florida; office, 46 N. E. Fifth Street; residence, Helene Apartments, Miami.

THE YORK COUNTY MEDICAL SOCIETY held its regular meeting at Rock Hill on February 9. The principal address was made by Dr. R. S. Cathcart, of Charleston, president of the South Carolina Medical Society, who stressed the need for closer co-operation between the medical profession and the public in regard to health measures. Other addresses were delivered by Dr. E. H. Hines, of the state body, and Dr. Joseph Connor, of Charleston. Among other visitors present were Dr. A. F. Mahoney and Dr. J. J. Goudelouck, of Monroe, N. C., and Dr. T. A. Campbell, of Blacksburg. Dr. W. W. McGill, of Clover, was elected president for the ensuing year, with Dr. L. S. Hay, of Rock Hill, vice president, and Dr. W. C. Whitesides, of York, secretary-treasurer. The body decided to meet again on

March 9, the second Tuesday of the month.

THE PITT COUNTY MEDICAL SOCIETY held its regular meeting in the basement of the Memorial Baptist Church, Greenville, on the evening of Feb. 11.

The meeting was presided over by the president, Dr. L. C. Skinner, and the following members responded to roll call: Drs. Garrenton, Dickinson, Basnight, Hemingway, Laughinghouse, Dixon, Frizzelle, Johnston, Williams, Pace, Greene, Smith, Outland, Wooten, Ellen, Nobles, Dawson, Smith, Hooker and Schultz.

Dr. H. Frederick Jones, pastor of the Memorial Baptist Church, was a guest of the society and he made a most interesting talk.

Dr. W. W. Dawson, who has been absent from the past several meetings, on account of illness, was present, and expressed his great pleasure at being able to attend the meeting.

Dr. J. S. Hooker, of Farmville, who recently joined the society, was introduced, and in a few appropriate words, expressed his pleasure at being a member of such a live and active organization.

After some discussion it was decided that the Medical Society would not join the Merchants' Association in collecting delinquent accounts.

The committee for the Tri-County Tuberculosis Hospital made a report on what has been accomplished, and reported that other plans are yet to be made before any definite information can be given out.

Dr. Grady Dixon, of Ayden, read an interesting paper on "Ulcers Below the Knees." The paper was discussed by Drs. Dickinson and Smith.

Dr. K. B. Pace read a paper on "Acidosis," and this was discussed by several members.

Dr. Dickinson reported an unusual case of stone in the kidney which has come under his observation.

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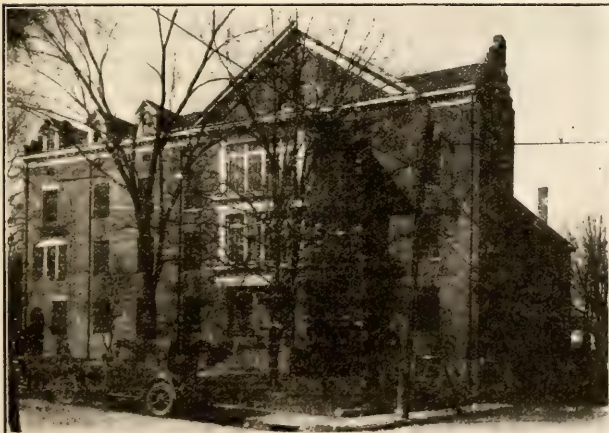
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RESOLUTIONS PASSED BY MECKLENBURG
COUNTY MEDICAL SOCIETY,

MARCH 2, 1926

Whereas, in the early morning of January 20th, soon after his return from a meeting of this Society, death claimed our fellow-member, Dr. R. Z. Linney; and

Whereas, this Society is desirous of expressing its sense of loss:

Be it Resolved:

- (1) That the local profession has lost one of its most outstanding members;
- (2) That the surviving members of

his family have our deepest sympathy; and

(3) That a copy of these Resolutions be mailed to Mrs. Linney, one spread upon the minutes of this Society, and one sent to each of the following with request for publication: Southern Medicine & Surgery, Charlotte Observer, Charlotte News, and Taylorsville Mountain Scout.

(Signed)

C. M. Strong, M.D.

T. C. Bost, M.D.

J. M. Northington, M.D.

Committee.

REVIEW OF RECENT BOOKS

A SYSTEM OF CLINICAL MEDICINE Dealing with the Diagnosis, Prognosis and Treatment of Disease for Students and Practitioners, by Thomas Dixon Savill, M.D., London. Seventh Edition. \$9.00. New York, William Wood and Company MDCCCXXV (All rights reserved).

This book is written, and admirably suited, for the man who is seeing many patients, afflicted with a wide range of diseases. Its approach is thoroughly practical; it does not attempt to encroach on the fields of research and experimentation.

The listing of the main symptoms which characterize a certain disease, proceeding to an accounting for these symptoms by every probable means, and concluding with a rational differentiation, is a course of immense clinical value.

The "Formulae of Useful Prescriptions" is a feature of unique value in a text-book of medicine of this day, when drugs are being so much derided and discounted.

INTESTINAL TUBERCULOSIS, Its Importance, Diagnosis and Treatment. A Study of the Secondary Ulcerative Type, by Lawrason Brown, M.D., Chairman of the Medical Board of the Trudeau Sanatorium, Saranac Lake, New York, and Homer L. Sampson, Roentgenographer of the Trudeau Sanatorium, Saranac Lake, New York. Illustrated with 112 engravings. \$4.00, Lea & Febiger, Philadelphia and New York, 1926.

This is one of the many outgrowths

of the hopefulness of Dr. E. L. Trudeau, and the ardent application of his successors to the problem of the relief of diseased mankind.

The history of intestinal tuberculosis is traced through many periods during which it was ill understood and variously misnamed.

In the chapter on prognosis a note of the most definite cheerfulness is struck, and it is pointed out that only recently has it come to pass that anything but black despair dominated the situation. "If the patient can be placed under proper heliotherapeutic and general treatment, the prognosis for the intestinal tuberculosis is decidedly favorable."

This is by far the most hopeful expression on this subject which has come to the reviewer's eye; and, coming from such a source it cannot fail to command respect and inspire confidence.

TRANSACTIONS of the Thirty-first Annual Meeting of the AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY, INC., held in Atlantic City, N. J., May 22nd, 23rd and 25th, 1925. Published by the Society, 1925.

From its very nature this volume is of most interest to specialists practicing in what we usually regard as a very restricted field; however, a perusal of its pages will awaken any doctor to a new realization of the fact that whatever

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brings about disease of any part is of vital concern to every doctor.

Among the subjects which are discussed as main or secondary factors in the disease conditions on which new light is shed or sought are diabetes, pneumothorax, gastro-intestinal disturbances, furunculosis, paralysis, vasomotor disturbances, the common cold, headaches, and pulmonary abscesses.

PSYCHOANALYSIS AND BEYOND PSYCHOANALYSIS, by Leonard L. Landis, M.D., Formerly: Assistant Clinical Instructor at Post-Graduate Hospital and the University of New York Internal Medicine Department; Assistant to Dr. Lustgarten of Mt. Sinai Hospital; Editor-in-chief of the "Life and Health" Magazine. Present National Chairman of the American Association of Independent Physicians, Etc. MCMXXIV, American Association of Independent Physicians.

This is an attempt to modify and apply the theories of Freud. The author does not entirely agree with this writer, but there is much of sameness in method and conclusion.

All of us who are not specialists in mental and nervous diseases, (indeed if there be a real division) hope for the day when these specialists will speak a language intelligible to outlanders. When we are confronted by a difficult problem, telling us it is "a complex" has added little to our information or our understanding.

"Psycho-cosmology" may develop into something tangible and demonstrable. We are persuaded that, so far, it is in the realm of things hoped for.

A Manual of CLINICAL LABORATORY METHODS, by Clyde Lottridge Cummer, Ph. B., M.D., Associate Professor of Clinical Pathology, School of Medicine, Western Reserve University; Visiting Dermatologist, St. Alexis Hospital and St. Vincent's Hospital, Cleveland, Ohio. Second Edition, Thoroughly Revised. Illustrated with 169 engravings and 12 plates. \$6.50. Lea & Febiger, Philadelphia and New York, 1926.

The object of earlier editions "to prepare a text-book for medical students and a guide for physicians and laboratory technicians with concise, readily available and intelligible directions for useful diagnostic methods" has been continued in this one.

The arrangement of the chapter on examination of the blood will be cited as an example; introductory, equipment, indications, procedure, calculations, criterions for judging accuracy, physiological variations, variations in disease; and the succeeding chapter deals with the pathological histology and differential diagnosis of blood diseases.

The same minute and rational detail characterizes the sections dealing with examinations of other specimens coming to the laboratory.

Potter's Compend of MATERIA MEDICA THERAPEUTICS and Prescription Writing, with Especial Reference to the Physiological Action of Drugs, based on the Tenth Revision of the U. S. Pharmacopoeia, including also many unofficial remedies, by A. D. Bush, B.S., M.D., Professor of Pharmacology, Emory University, Ninth Edition. Revised. Philadelphia. P. Blakiston's Son & Co., 1012 Walnut Street.

This is a compend on the use of drugs brought up to date by a professor of pharmacology, the person in best position to pass definitely on the relative values of different drugs purporting to bring about any certain change in the organism.

MEDICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume IX, Number IV, Tulane University Number, January, 1926. Octavo of 381 pages, with 49 illustrations. Per clinic year, (July 1925 to May 1926.) Paper, \$12.00, Cloth \$16.00 net. Philadelphia and London. W. B. Saunders Company.

Naturally and gratifyingly a "Tulane University Number" contains much on semi-tropical diseases. Malaria, pellagra, hookworm disease, amebic dysentery, sprue, dengue, leprosy, bacillary dysentery and ainhum claim attention. And it is appropriate that the city of Matas should have in its "number" a clinic on aneurysm.

MEDICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume IX, Number V, Chicago Number. March, 1926. Per clinic year, (July 1925 to May 1926.) Paper \$12.00, Cloth \$16.00 net. Philadelphia and London. W. B. Saunders Company.

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Journals and Society Transactions For Sale

This Journal has on hand the following, mostly extra copies. Those interested in procuring any of them for public or private libraries address Southern Medicine and Surgery:

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Medical Times
1924 Complete except Nos. 1, 2 (No. 4 duplicated)
1925 Complete

Medical Journal and Record (semi-monthly)
1925 Complete

Calcutta Medical Journal
1922 Complete except Jan. and April
1923 Complete except April
1924 Complete except May and Sept.
1925 Complete except Oct., Nov., Dec.

Virginia Medical Monthly
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1925 Complete

as a purely medical condition, and only recently claimed by the surgeons, is here treated of by Dr. Mix, through the successful treatment, an abdominal operation, was carried out by Dr. E. Wyllys Andrews.

Among unusual subjects here treated of are tuberculous lobar pneumonia, hyperthyroidism simulating primary heart disease, digitalis delirium, hypersensitiveness to milk, sudden death following prophylactic inoculations against diphtheria and fusospirochetal pulmonary infection complicating diabetes.

INTERNATIONAL CLINICS—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles, by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A. Volume 1, Thirty-sixth series, 1926. Philadelphia and London, J. B. Lippincott Company, 1926.

Dr. Cushing, of Montreal, contributes an excellent article on the sequelae of diphtheria. Sometimes this disease is not prevented; in those cases sequelae still demand treatment.

Cardiac arrhythmias are discussed at length by Dr. Reifenstein, of Syracuse. Lovely reproductions of electrocardiographic tracings aid the text.

Our own La Roque, of Richmond, tells us about the treatment of appendicitis. His concluding "resolutions" are worthy of quotation:

(1) To any patient with severe abdominal pain liquid food is harmful; solid food is dangerous.

(2) To attempt to purge the bowels is a pernicious practice.

(3) Purgative medicines should be removed from the family medicine shelf. Laws similar to those against narcotics and alcohol should prohibit the sale of cathartics except upon prescription, and prohibit the treatment of patients with abdominal pain by any but qualified doctors of medicine.

(4) People should be taught to call promptly a competent doctor for every case of severe abdominal pain and to take no medicine, save possibly a single dose of paregoric, and no food before

the doctor arrives.

(5) Every doctor should regard calls to patients with abdominal pain as emergency calls to be answered with great promptness, commanding painstaking study at intervals of not more than six or eight hours until the pain and other symptoms are completely relieved, or a working diagnosis made.

(6) The correct diagnosis of the exact cause of severe abdominal pain within the first few hours of its onset is possible but rare. When labeled appendicitis and operation performed or when labeled not appendicitis and operation not performed, the errors in diagnosis in both directions will total fifty-fifty.

(7) The immediate treatment of symptoms and repeated examination of an acutely sick abdomen for the first few hours is of greater importance than exact diagnosis, will diminish the number of errors in diagnosis, and will permit the substitution of therapeutic for exploratory operations.

(8) The permanently curative treatment of appendicitis is admittedly by surgical operation. There is no proof that the policy of pushing, shoving and rushing patients to the nearest operating table is ever necessary or generally wise.

(9) There is no place in the management of appendicitis for hysterical excitement and theatrical performance.

(10) The whole course of treatment of appendicitis in most cases may be very simple and safely carried out. In others it may be extremely difficult and dangerous, entailing the need for the solution of big problems and the performance of operations of great magnitude. In every case the rigid application of physiological treatment should be applied from the moment of onset of the symptoms before, during and after operation until the patient is well on the road to complete recovery.

Other articles of especial interest deal with contra-indications to radium in gynecology, nephrosis, acute superficial circumscribed abscess, and recent progress in surgery.

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THE SURGICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume V, Number VI. Philadelphia Number, December, 1925.) 223 pages with complete index to volume 5 and 50 illustrations. Per clinic year (February 1925 to December 1925.) Paper \$12.00, Cloth \$16.00 net. Philadelphia and London. W. B. Saunders Company.

Much of this number is given over to Dr. Deaver's clinic and his many students, pre- and post-graduate, will welcome an opportunity to read his latest expression on such vital topics as peritonitis, duodenal ulcer, fecal fistula, tuberculous peritonitis, exophthalmic goiter, carcinoma, ascites, appendicitis and gall-bladder disease.

The neurosurgical clinic of Dr. Charles H. Frazier will command the attention of a large group; and those of Drs. Muller, Grant, Auspach, Herman and Northrop will supply the most authentic information on subjects in their various lines.

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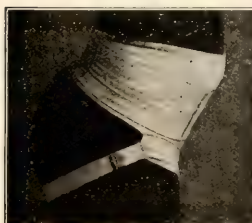
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Craven	Dr. R. Duval Jones.....New Bern	Dr. Christopher S. Barker.....New Bern
Cumberland	Dr. W. P. McKay.....Fayetteville	Dr. J. N. Robertson.....Fayetteville
Davidson	Dr. J. E. Hobgood.....Thomasville	Dr. Grover C. Gambrell.....Lexington
Davie	Dr. W. C. Martin.....Mocksville	Dr. Andrew B. Byerly.....Coolidge
Duplin	Dr. John W. Carroll.....Wade	Dr. R. C. Williams.....Tarboro
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Edgecombe	Dr. Spencer B. Bass.....Tarboro	Dr. John S. Hooker.....Winston-Salem
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Mitchell		
Montgomery	Dr. Alexander F. Thompson.....Troy	Dr. Charles Daligny.....Troy
Moore	Dr. A. McN. Blue.....Carthage	Dr. J. W. Dickle.....Southern Pines
Nash	Dr. H. Lee Large.....Rocky Mount	Dr. A. T. Thorpe.....Rocky Mount
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*Your assistance in keeping this list revised to date, as well as in supplying medical news notes is greatly desired.—Ed.

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No. 3

ADDRESS OF HON. A. WILTON McLEAN, GOVERNOR OF NORTH CAROLINA

Delivered to the Tri-State Medical Association of the Carolinas and
Virginia, February 16, 1926

It is a high honor, I assure you, to be present on this occasion to extend to the members of the medical profession of our sister states of Virginia and South Carolina our friendly salutations.

I cannot hope to express adequately the sentiments of warm regard and genuine friendship which the people of my state entertain for the people of the states which lie to the north and to the south. It is sufficient, perhaps, to remind you that in the history, in the aspirations of the peoples and in the tried comradeship that always accompanies friendly intercourse, there is an unbroken record of over three hundred years of common interest and genuine kindredship between our peoples.

Although many distinctions between the three states during the friendly contests for position which we have waged with each other have often been pointed out, it cannot be forgotten that throughout all of the vicissitudes through which we have passed, from early colonial days down to the present, including five wars, our peoples have thought and worked and fought as brothers. We have exchanged men and ideas; we have contributed to each other in manpower and money power; we have struggled together, triumphed together and suffered defeat together. We are in all essential particulars people of the same blood and characterized by the same aspirations. The invisible boundary lines between North Carolina and Virginia on the one hand and North Carolina and South Carolina on the other are unmarked by any actual barrier.

Albemarle, the first permanent settlement in North Carolina, was the result

of the overflow of population from earlier settlements in Virginia into the fertile river valleys of the South. North Carolina and South Carolina were identical until 1732. The whole history of the three states constitutes a fine record of mutual intercourse, assistance and courtesy. On several occasions during the early colonial days, Virginia and South Carolina came to the rescue of the infant colony of North Carolina when it was menaced by the Indians. Later North Carolina returned the favor in the same spirit of mutual helpfulness. Throughout the trying period of the Revolution and in the fateful days of the Civil War the blood of the brave soldiers of these states was mingled on many hard fought battlefields. One reason why the three states have had so much in common is due to the homogeneity of their Scotch-Irish population. These hardy immigrants, coming by way of Pennsylvania, traveled through the valley of Virginia along the great Yadkin Road and settled in the Piedmont regions of Virginia and North and South Carolina, so that even prior to the Revolutionary War the character of the population and the genius of the people were identical.

Since these remarks are addressed to a convention of medical men of the three states, it is interesting to recall that Hans Martin Kalberlahn, the famous Moravian physician of Salem, whose activities were at their height in 1760, was the leading physician of the Piedmont section of the three states. Tradition tells us that his patients came from Virginia and North and South Carolina, travelling for the most part

over Indian trails for a distance of hundreds of miles.

Perhaps the most appropriate thought which the people of the three states should have in common at the present time is that in this year occurs the 150th anniversary of the Declaration of Independence and the 100th anniversary of the death of Thomas Jefferson, the author of the great document. Jefferson, of course, was the greatest exponent of the political principle which we call democracy in government, and which at the present time prevails so generally throughout the civilized world. This great principle was most valiantly defended and extended by another great statesman, Andrew Jackson, the mention of whose name is likely to precipitate friendly rivalry between North and South Carolina. For the purposes of this auspicious occasion, when North Carolinians and South Carolinians are dwelling together in peace and unity, imbued with the same spirit of high resolve, I shall waive the ancient controversy as to the place of Jackson's birth and solemnly declare that he was the joint product of the two states. And I further declare that that fact alone affords glory enough for both North Carolina and South Carolina.

I should like to say just a few words to the physicians and surgeons who are gathered here without regard to the states of their nativity. The history of the practice of medicine begins with the history of civilization itself and during this long period the doctor has never failed to contribute his full share to the upward progress of the human race. No profession has had the satisfaction of recording a greater degree of advancement for the benefit of mankind in the last half century than the medical profession, in which I include surgery. During the last twenty-five years the average span of human life has been extended from forty-three to fifty-eight years. This remarkable achievement has been largely due to what we usually call public health work; that is, the adoption by large masses of the people of scientific methods for the preven-

tion of disease. At the present time the attention of the people of America is particularly directed to the South as the scene of amazing development of material resources. The three states represented here are contributing their full share to this marvelous era of Southern development. I have no purpose of indulging here in any boasting about the progress which has taken place in North Carolina, further than to suggest that what we have accomplished in a material way up from the despair and poverty that characterized the period following the Civil War to the confidence and prosperity of today, is an achievement in which we may feel just pride because it was born of the unconquerable spirit of our people. The word, development, which we use so often to describe our progress is itself repugnant to chance and accident. On the contrary, it implies forethought, enterprise, labor and the survival of the fittest. Development and progress therefore require serious reflection as to cause and effect. I say to you in no manner of flattery, that the profession which you gentlemen represent, actively engaged as it has been in the conservation of health and life, laid the foundation on which all our statistics of economic growth, which we now express in hundreds of millions and even billions, was erected. Without the popular education of the people in the scientific and practical methods of health and hygiene which you and your brethren have fostered, we would have failed of our manpower in the moment of our greatest opportunity. The great factory whose gleaming lights indicate full production to meet increasing demand, is the result of capital and business acumen. But it was the medical profession and the public health service that contributed in a large measure to the supply of intelligent labor, with sound stomach and steady nerves that enables it to successfully meet its task. A state that realizes that its prosperity and happiness depend on the effectiveness with which its citizenry serves, develops and uses its natural resources, must include

in its economic equation, the everlasting truths that successful ambition and productive energy are possible only when the necessary manpower is conserved by the application of modern rules of health and hygiene.

There are many things about North Carolina's development and progress which I might narrate for the benefit of this intelligent audience, but none to my mind creates more meat for constructive thought than our recognition of that essential factor in our progress which we usually refer to as public health work.

It is significant also, as we built health by precept upon precept, as we spread the larger common perils and the information as to available preventatives, as we taught our people to know that their ills were due to their own preventable negligence, so a thousand and ten thousand-fold we prospered in our material resources, I wish I had the time to give you the figures showing what has been done by our public health service in North Carolina in the last twenty-five years. I could cite you figures by the yard and prove to you that every subtraction from disease and death has meant an addition to life, hope and material prosperity. I will not tire you with statistics, but invite you, if interested, to look to the records of the health work in our state and see the parallels between agricultural values, industrial expansion, banking resources, highways and educational progress, which have kept pace with our improvement in physical well-being, in this great work of the prolongation of life, the prevention of disease and the consequent saving of our man-power. These achievements have been the result of state action through the agency of our public health department on the one hand and the whole-hearted, unselfish and constructive cooperation and assistance rendered by the medical profession of the state on the other hand.

The rank and file of the physicians of the state, not only gave their time and encouragement in order to promote

and make effective the plans and benefits of the public health service, but in many instances cheerfully sacrificed a material part of their own livelihood.

I think that Pasteur was the greatest benefactor of the human race that has lived in the past thousand years. He has not only done more to conserve human life and health than any man that ever lived, but he has made possible some of the greatest constructive achievements of the world in the last hundred years. Out of his discoveries have grown all or nearly all of the wonderful germ isolations; and the marvels that are every day practiced in surgery, were made possible by the understanding of antiseptics as a cure for deadly microbes. It was he who made it possible to live in Cuba in safety, in Central and South American; it was he who made the Panama Canal possible and the jungles of Africa habitable. I feel that I cannot more appropriately close my remarks than to repeat the fine words used by him, in the address he delivered when the great institute which bears his name was opened, in epitomizing the ideal for which he labored:

"Two opposing laws seem to me now in contest. The one, a law of blood and death, opening out each day new modes of destruction, forces nations to be always ready for the battle. The other a law of peace, of work and health, whose only aim is to deliver man from the calamities which beset him. The one seeks violent conquests, the other the relief of mankind. The one places a single life above all victories, the other sacrifices hundreds of thousands of lives to the ambition of a single individual. The law of which we are the instruments strives even through the carnage to cure the wounds due to the law of war. Treatment by our antiseptic methods may preserve the lives of thousands of soldiers. Which of these two laws will prevail, God only knows. But of this we may be sure, that science, in obeying the law of humanity, will always labor to enlarge the frontiers of life."

THE EXOPHTHALMIC GOITER PATIENT AND THE NEURASTHENIC*

HUGH S. BLACK, M.D., The Mary Black Clinic and Hospital, Spartanburg

The frequency in which the neurasthenic patient with a harmless palpable colloid thyroid is diagnosed exophthalmic goiter suggested a subject worthy of discussion. Before entering into this, however, one should say a few words regarding the thyroid gland in exophthalmic goiter.

The thyroid in exophthalmic goiter is usually symmetrically enlarged, though in some cases the gland may be the size of a normal lobe or again the size may fluctuate. The size has no definite relations to the severity of the disease, for oftentimes in the most severe cases the gland is of normal size or less. To the trained palpating finger, the characteristic firmness and granular feel is practically always present. On cross section, the gland has the appearance of raw beef steak, is firm and hard, due to the increase in the number of cells with little or no deposit of colloid. Under the microscope, the tissue shows a hypertrophy and hyperplasia either throughout or through part of the gland.

Exophthalmic goiter is not a common disease. It is a disease that is often wrongly diagnosed in its incipency, a disease that is marked by an exaggeration of the normal function of the gland, resulting in a hypersecretion, the stimuli of which are unknown. It is a self-limited disease, a disease characterized by definite symptoms and signs and by a definite wave-like course with remissions, the remissions being measured in weeks and months and not in days as seen in the neurasthenic. The disease tends towards chronicity, though some cases are fulminating and often called malignant exophthalmus, as death results in a short time, even as soon as three days.

Exophthalmic goiter is as a rule, of acute onset, but some cases are insidious and often so slow that the patient has her attention called to it by some friend; or, if she knows it herself, she

tries to hide the nervousness, saying that it is due to overwork or to activity. It is the exophthalmic patient who hates to give up and acknowledge her inefficiency, whereas the neurasthenic takes delight in doing this.

If one contrasts the two types of patients as they enter the physician's office, it will be observed that the exophthalmic patient enters in a fast gait, very alert, talks freely, has keen brilliant eyes, a peculiar stare, either with or without exophthalmus, and has a flushed face resembling that of a youth. Further observation will reveal that of restlessness, the continuous movements of the hands and feet and constant changing of the position on the sofa. She has a tendency to over-estimate her strength, but on examining, one will find a marked loss of quadriceps strength. The neurasthenic on the other hand will enter in a slow walk almost falling to the seat, with a dull, expressionless appearance, an exhausted feeling and a subjective sensation of weakness, rather than a true muscle weakness.

Dyspnea in the exophthalmic patient may be due to cardiac disease or be the result of toxins on the respiratory center because in those cases where there is no cardiac pathology, dyspnea may be fairly well marked. The hyperthyroid case will have to be questioned about dyspnea while the first symptoms voluntarily given forth by the neurasthenic are shortness of breath and palpitation. Palpitation in hyperthyroidism is usually persistent, while in neurasthenia it comes from the least excitement.

The pulse rate in hyperthyroidism is persistently increased, rapid and superficial, characterized by long continued action of the heart and a high rate even while asleep, while in the neurasthenic the rate is normal during sleep. In the hyperthyroid cases, the rhythm may be regular, but in later stages it becomes irregular and finally fibrillating.

It is the increase in the systolic blood pressure and the normal diastolic pres-

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

sure which should make one suspicious of an exophthalmic goiter. A high pulse pressure is almost invariably the rule while in neurasthenia the pulse pressure is normal or thereabout.

Tremors in the exophthalmic goiter patient are fine, regular, and of uniform rhythm though they may be coarse. Besides the tremors, there may be jerky, involuntary movements of the body, and peculiar shifting of the hands and feet; while a neurasthenic patient will often have tremors which are intermittent, and of no definite rhythm, or be calm and motionless.

Pain is not a common complaint in hyperthyroidism, while the neurasthenic complains of more or less general aches and pains. Headache may be present in both, but in the goiter case it is worse in the morning. Insomnia is most marked as a rule in the hyperthyroid case.

The exophthalmic patient complains of excessive warmth and heat, perspires too freely and is warm when the other members of the family are cold, while the neurasthenic complains of hot flashes with cold clammy hands, though the body temperature in both are normal. It is the persistent high pulse rate which produces a vasomotor dilatation that makes the hyperthyroid case too warm and moist.

The appetite in hyperthyroid cases is usually excessive, in fact, often ravenous. The function of the thyroid gland is to regulate the amount of energy liberated and in exophthalmic goiter the energy liberated is excessive. But in order to supply the demanded energy the patient's appetite must increase, and even then she loses weight rapidly, because this energy is liberated faster than it can be restored. In the neurasthenic, the condition is just the opposite; a poor appetite with practically no loss of weight, but complains of fullness and distress after meals.

The exophthalmic goiter has no gastric disturbances except when the course is topped by a crisis and then there is nausea, painless vomiting, either with an empty or full stomach,

the stomach probably being in a state of spasticity. The neurotic may have functional gastric disturbances. Diarrhea is often present in both, the stools being small and watery in hyperthyroidism and not the mucus type as in neurasthenia.

The cardiac findings in exophthalmic goiter depend upon the severity of the disease. In the early stage they may be negative, but in the later stage the heart enlarges and murmurs are heard over the entire precordium and finally auricular fibrillations creep in.

The itching of the skin, the falling of the hair, the peculiar finger nails which eventually show an elevation of the tip, and a depression in the centers may be present in hyperthyroidism, but likewise seen in other conditions.

Bilateral exophthalmus, the signs of Stelwag, von Graefe, Dalrymple, Moebius, and Kocher may be present, but are not pathognomonic for hyperthyroidism. The mental condition is most restless and unstable in hyperthyroidism and may terminate in acute delirium, hallucinations, and eventually death, while the neurasthenic as a rule is just the opposite.

As seen from this, a few contrasting remarks regarding exophthalmic goiter and the neurasthenic patient have been brought forth but not for entering into a thorough differentiation and an exhaustive discussion. As you may have noticed no mention has been made of the use of the basal metabolism test, the presence of thrills and bruits, Goetsch's test and other tests which aid in the diagnosing of exophthalmic goiter.

DISCUSSION

Dr. J. P. Munroe, Charlotte:

It is very interesting to me to see a surgeon get up and give such an interesting discussion of what might be called the medical line, of the signs and symptoms that go to make up what we call neurasthenia. I want to thank the doctor for presenting such a nice, clear-cut discussion of the subject.

THE ACCESSORY DUTIES OF THE OBSTETRICIAN*

M. PIERCE RUCKER, M.D., Richmond

There is no satisfactory definition of the term obstetrics. The word has a French origin and is derived from *obstare*, which means to stand in front of. A glance at any of the old drawings of a patient on the obstetrical chair shows how the term came into use, but times have changed, and the obstetrician no longer merely stands in front of the patient.

For the purposes of this paper, the term obstetrician means one who does obstetrics; whether he devotes all or only a part of his time to this branch of medicine makes no difference.

The chief duty of the obstetrician, of course, is the delivery of pregnant women. The successful accomplishment of this, demands adequate antepartum care and postpartum supervision until the patient is her normal self again. The question is, when should the one begin and the other one cease.

It is conceivable that even in early infancy circumstances can arise that might profoundly affect the patient's reproductive powers. Gonorrheal vaginitis comes to mind at once in this connection. The hygiene of puberty is distinctly his province. Macomber² says that the care or lack of care at the first menstrual period has a great effect not only on future dysmenorrhea but also upon sterility. He makes the point that the patient should be kept in bed the entire time of the first menses. Disorders of menstruation demand study and treatment from the point of view of future childbearing. When this is done the curette is relegated to a place among the diagnostic instruments.

The hygiene of marriage is entirely within the obstetrician's jurisdiction and Green³ in his *Diseases of Women* (Case History Series) gives a very well worded advice to prospective husbands. The obstetrician should keep up with the newer studies in sterility, for on his shoulders falls the burden of treating this condition whenever a specialist in this subject is not available. So too,

must he be cognizant of the important work of Dr. Robert L. Dickinson⁴ and his committee upon the question of contraception.

Just as prenatal care can be conceived of as beginning in the cradle, so post partum care should extend much further than is usually thought. Countless women are more or less invalids on account of lack of care at this time. Lynch⁵ calls attention to the importance of correcting retroversions in the first few months after delivery. Many cases of endocervicitis begin with childbirth and should be cured as soon as possible. The supervision of the lactating breasts certainly belongs to postpartum care.

To whom should our patients turn when beset with the perplexities of the menopause? Naturally they look to the one who has stood by them in the trials of labor. He knows their history and has their confidence, and should be ready and willing to give them sane counsel at this time. This brings us to the question as to the part the obstetrician should play in the cancer campaign. If his patients realize that he is willing and ready to counsel with them at all times, they are apt to consult him early and on slight provocation rather than go to some strange doctor. This gives the obstetrician a strategic position in the early recognition of cancer of the generative organs, and his opinion as to the advisability of operation, being unbiased, carries more weight.

Finally, what should be the obstetrician's attitude toward periodic health examinations? The public has gotten used to periodic inspection of elevators, automobiles and teeth and are rapidly taking up the periodic health survey. Already there are some 500 commercial agencies in California alone. Musgrave⁶ divides these into the "stale urine" group and those that rely entirely upon answers to a questionnaire. The American Medical Association has taken the stand that this function belongs entirely to the medical profession and for several years has had an active committee

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

to spread the idea among its members. It prints blanks to facilitate the examinations and a bulletin to explain the blanks. Dr. Haggard, the President of the A. M. A., in an address before the Southern Medical Association, very eloquently pictured the benefits of the routine health examination both to the public and to the physician. He called attention to the lengthened span of human life that the wonderful advances of modern medicine have caused. The improvement in infant care and the prevention of infectious diseases has left only the degenerative diseases and cancer for any great advances of the future. The most obvious way now is that of individual hygiene, of which periodic health examination is the foundation.

Should the idea of periodic health examinations become prevalent, as undoubtedly it will, there is danger that women will patronize the commercial agencies, chiefly for the reason that they are impersonal and require no examinations. But for the health examination to be of value there must be a careful and painstaking physical examination. Only in this way can cardio-renal disease and cancer be recognized in their incipency. Only in this way can the pre-cancerous conditions be corrected. Only in this way will many of the late sequelae of birth trauma, those that make their appearance as the supportive tissues weaken with age, be recognized.

Who among the medical profession should undertake this part of the program? Obviously the obstetrician. He has the confidence of his patient and is better equipped for the examination. If his postpartum care has been adequate it should drift gradually into the periodic health examination. With scarcely

any extra equipment and with an understanding sympathy with the movement, the obstetrician can do his bit in putting across the most difficult part of the program. We should look on this as a duty not only to our patients but also to the profession as there is already too great a tendency for persons with no medical training to take over the functions of medical men.

In conclusion, the term obstetrics should not be interpreted in its literal meaning, i. e., "standing around during labor"; but in a broader sense of being a shield for child-bearing woman to protect her against the ills and maladies that are peculiar to her sex. Everything that directly or even remotely, has a bearing upon the physiology or the pathology of reproduction should be his concern. This should include, of course, the skillful attention during parturition, the best possible prenatal care, going back, as occasion demands, to early infancy, and adequate postpartum supervision. When desired, the postpartum care can be extended so as to insensibly merge into the routine health examination.

REFERENCES

1. Picture of obstetrical chair: Surg., Gynec. and Obst., 42: opposite p. 295, 1926.
2. Macomber, Donald: Prevention of sterility. J. A. M. A. 83:678, 1924.
3. Green, Charles M.: Disease of women including abnormalities of pregnancy, labor and puerperium. Boston, W. M. Leonard, 1920, page 372.
4. Dickinson, Robert L., Contraception: A medical review of the situation. Am. J. Obst. and Gynec. 8:583, 1925.
5. Lynch, F. W.: Retroversion of uterus following delivery. Am. J. Obst. and Gynec. 4:362, 1922.
6. Musgrave, William Everett: Social movements for the prolongation of life. J. A. M. A. 85:1639, 1925.
7. Haggard, William D.: What price health? Southern M. J. 18:896, 1925.

A bulletin comprising a resume of the literature of Silicosis is available gratis to any physician applying for it. Address: Director, Bureau of Industrial Hygiene, New York State Department of Labor, 124 East Twenty-eighth Street, New York City.

Whooping cough is the third highest cause of death among the acute communicable diseases.—Bul. N. Y. Dept. Health.

ESOPHAGEAL DIVERTICULUM*

R. L. PAYNE, M.D., F.A.C.S., Surgeon St. Vincent's Hospital, Norfolk

It is not a rare occurrence for a patient to present himself to a doctor with the chief complain of obstruction in the swallowing. It is common practice for the doctor on these occasions to introduce a bougie as the first step in diagnosis. If the bougie is not used the next common procedure is to introduce an esophagoscope to determine the location and character of the obstructive lesion. A good reason for wanting to discuss the subject of esophageal diverticulum is to condemn the two above mentioned procedures as primary diagnostic measures and to emphasize the selection of x-ray first in all of these obstructions. I have knowledge of two cases of esophageal diverticulum who died within four days following the use of a bougie in one case and the esophagoscope in the other case, each by an inexperienced man, as primary measures for diagnosis.

SYMPTOMS AND DIAGNOSIS

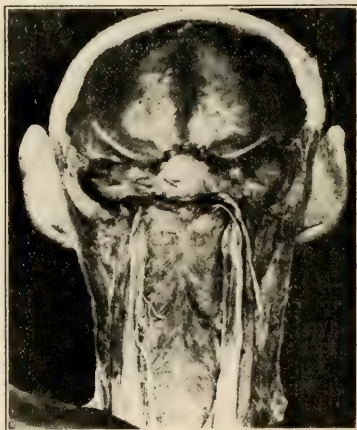
This lesion of the esophagus occurs more frequently in men than women, the ratio being about four to one, and is more frequently seen in the fifth decade of life. The symptoms usually have existed over a period of many years, but suddenly seem to become more marked with exaggeration of the obstructive features coincident with the inability to take food, and in many instances inability to swallow liquids except in teaspoonful quantity. The accompanying starvation with great loss of weight and weakness is what usually brings these patients for medical advice.

True diverticulum of the esophagus, as far as we know, occurs only in the extra-thoracic portion of the esophagus and presents a clinical picture which is very definite. The clinical symptoms are progressive dysphagia, regurgitation of a so-called squash or gurgling sound in the neck (produced by the admixture of air, mucous and food in the hernial sac), and later the regurgitation or even so-called vomiting of food and

mucous. The most common error is to mistake these symptoms as suggestive of malignancy.

The diagnosis can be very quickly and simply determined by first, a careful fluoroscopic examination, and secondly, by flat plates after the swallowing of a thick barium mixture.

In a true diverticulum, under the fluoroscopic screen, the problem is usually solved by the administration of a thick barium and glycerine mixture which, when swallowed, will be seen to immediately fill the sac of the diverticulum, and then, when more is given, it is seen to pass by the sac and without difficulty continue down the esophagus into the stomach. In all other forms of esophageal obstruction the barium mixture does not pass readily but usually is seen as a fine line along the course of the esophagus both with the fluoroscopic screen and on the flat plates.



No. 1—Posterior dissection of neck (from Edin-burgh Anatomy) showing the three constrictors of the pharynx together with the crico-pharyngeus muscle.

There is no line of bismuth shown along the course of the esophagus in the flat plates of a true diverticulum. This is due to the fact that once the diverticulum sac is filled the remainder of the

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

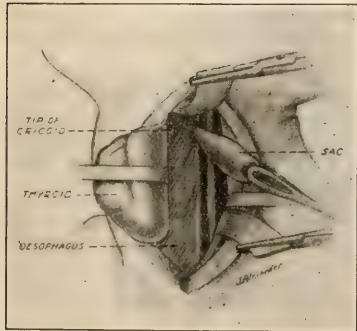
barium mixture passes freely on down into the stomach.

ETIOLOGY

Time does not permit me to go into the various theories offered in explanation of the formation of this type of diverticulum. Briefly, the sac is composed only of mucous membrane and gradually forms as a protrusion through the muscle fibers at the lowermost end of the inferior constrictor of the pharynx where the transverse and oblique fibers of the cricopharyngeal muscle join and leave a congenitally weak area. This area is in the center line of the esophagus posteriorly and on a level in the neck with the cricoid cartilage. Anatomically the sac is to be found just in front of the cervical vertebrae between the prevertebral and pretracheal cervical fascia, and, in the majority of cases, presents on the left side of the esophagus and just posterior to the thyroid gland and internal to the carotid sheath. When these sacs are distended or very large they often extend downward between the two planes of the cer-

tervention suggested for the relief of this condition.

Method No. I. When the sac is quite small and not over 4 cm. in length it may be inverted through its neck into the esophagus and then tightly constricted at the neck with a purse-string suture. Following this the muscle wall of the esophagus and pharynx should be brought together with interrupted sutures. This inverted sac in no way interferes with swallowing and in the course of a short period sloughs off at the site of the purse string and is swallowed. This is the simplest and safest method from the standpoint of infection; but in the reports found in the literature there have been more recurrences following this operation than by any other means of handling the problem.

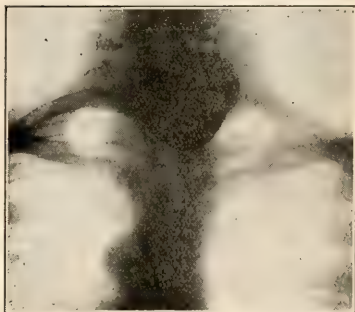


No. 2.—Sketch of esophageal diverticulum showing the neck of sac on level with cricoid cartilage.

vical fascia into the upper thorax behind the sternum. When the sac is completely emptied it usually rises in the neck and what is shown in the x-ray plates as of the size of a big lemon will appear at operation only about the size of one's finger.

TREATMENT

There are three types of surgical in-



No. 3.—Author's case showing esophageal diverticulum with neck and sac presenting in the right side of the neck.

Method No. II. This method is especially adaptable to rather long, large sacs which dip down behind the sternum and are entirely too large for possible invagination. This condition is handled by a two stage operation in which the sac is dissected free and brought out through the incision. The incision is then closed snugly around the sac and the edges of the skin attached to the sac as high up as possible. The second stage consists of an amputation of the sac on the fourth day at the level of the skin or, what is a better method, to open the incision in ninety-six hours, when the mediastinum below has been well walled off, and the sac amputated close to the esophagus with approximation of the muscles of the opening

when possible. If the sac is amputated at the skin level without opening the incision there will be left behind a small mucous tract which will often discharge for several months and will sometimes require a destruction of the epithelium lining the tract before final closure occurs. This, however, is a very safe method of procedure and almost invariably results in a permanent cure.



No. 4—Author's case showing neck of diverticulum coming off left side of esophagus.

Method No. III. This procedure calls for the freeing of the sac down to its neck and immediate amputation, making a one stage operation. Because of the probability of infection spreading downward into the mediastinum, from opening the esophagus, this procedure is the most dangerous method of handling the problem. There are, however, many of these diverticular sacs which are quite thick at the fundus but extremely thin and cobweb-like around the neck and near the esophagus. Thus it often happens that in completely freeing the sac the thin neck is torn and nothing but immediate amputation with reinforcement by the esophageal muscles is possible. The safest procedure under these circumstance, where primary amputation is necessary, is to pack the entire wound with weak flavine or iodoform gauze and later do a second-

ary closure of the wound, just as in toxic thyroid cases, after the fourth day.

Some surgeons in discussing this operation in the literature mention the difficulty of identifying a diverticular sac, and it has been advised in these instances to introduce an ordinary endoscope or esophagoscope through the pharynx into the sac. To the writer this difficulty seems to be greatly magnified, as the anatomical relations are very definite and there should be no trouble whatever in locating the sac immediately behind the thyroid gland.

POSTOPERATIVE MANAGEMENT

The most important post-operative question is the time of beginning with food and liquids. Where the sac has been invaginated it is entirely safe to administer liquids at the end of forty-eight hours, but with the other types of operative procedure the best method is the introduction of a Jute tube into the stomach at the time of operation. If this tube is introduced through the nose it can be kept in place indefinitely without any discomfort and feedings can be kept up by this method from ten to fourteen days at which time it should be entirely safe to permit swallowing.

Finally it is considered a wise procedure to pass an ordinary 26 esophageal bougie on one or two occasions after the patient has entirely recovered from the operation, and this should be done in the neighborhood of the fourth week and again repeated in about one month if the patient complains of any difficulty in swallowing.

DISCUSSION

Dr. M. O. Burke, Richmond:

I want to thank Dr. Payne for his paper, and for the pictures. I have had the opportunity of seeing only one case of that kind, and that has not been operated upon. The diverticulum shows up very prettily in the x-ray pictures, but the patient has declined so far to be operated upon.

CONTRACTED PELVES*

Review of 250 Obstetric Histories

IVAN PROCTER, M.D., Raleigh

Department of Obstetrics, Mary Elizabeth Hospital

The anatomy of the female pelvis and the mechanics involved in the passage of a child from its mother's womb, forms the basis of all scientific and rational conduct of labor. Important in the care of every pregnant woman are three outstanding things. A complete general history, a thorough physical examination, and accurate pelvimetry. The routine measuring of the female pelvis has been too long neglected. It is essential to the proper conduct of labor and it often affords opportunity to forestall complications that increase obstetric morbidity and mortality. No primipara should ever be allowed to enter the last months of pregnancy without having had the pelvis accurately measured, and the same rule applies to multiparae with history of difficult or prolonged labor.

The old classification of contracted pelvis is so complicated that it is impractical for everyday use. Contractions ordinarily can be divided into four classes (Burgess): First, the generally contracted pelvis; second, the masculine pelvis; third, the rachitic or nutritional type; fourth, those pelvis whose abnormality is the result of some outside condition such as caries of the spine, tuberculous hip, etc. Pelvic contractions are more frequent than we often suspect and this may explain part of the high obstetric morbidity and fetal mortality. Both Burgess and Litzman found 15 per cent of all pelvis to be abnormal, while Williams found every thirteenth white woman and every third negro to have a contracted pelvis. In our experience the pelvis was contracted in 16 per cent of the patients examined.

The general history in obstetrics is just as important as it is in the clinical study of a medical or surgical case. It should include the age of first walking, any severe illness or accident, the type of previous labors, and the history of infectious diseases, any one of which

may furnish a clue to a correct diagnosis.

In the physical examination we should observe the height, weight, type of shoulders and hips, the size of the head, presence or absence of rachitic rosary, bow-legs, size and thickness of the long bones, and distribution of the body hair. The undersize, lightly built woman with delicate framework presents the possibility of a generally contracted pelvis; whereas, the strong heavy shoulder and hip patient with male type of legs, and distribution of hair, point to the masculine or funnel type of pelvis. The large head, bow-legs, thick long bones, and beaded ribs are common characteristics of rachitis.

In order to measure the pelvis accurately, we must have knowledge of the anatomy; we must use care in our technique, and have a desire to learn the facts. The most common type of abnormality is seen in the generally contracted pelvis. Here, all the diameters are slightly and proportionately shortened. The justo minor pelvis is a good example, the average measurements being spines 23, crests 25, trochanters 26, external conjugate 18, diagonal conjugate 11.

The simple first pelvis (non-rachitic) resembles the normal except the sacrum is sunken downward and forward, giving the inlet a broad kidney shape. The pelvic cavity is slightly flattened. The distance between the spine and crest is normal. The antero-posterior diameter of the inlet is the most important measurement and this is slightly contracted, the conjugata vera ranging between $8\frac{3}{4}$ and $8\frac{1}{2}$ cm. If this diameter is 8 cm. or less, the pelvis is usually rachitic.

The flat rachitic pelvis is recognized by the usual signs of rachitis plus accurate pelvimetry. The most characteristic point is the flaring outward of the ilia so the distance between the antero-superior spines is equal to or even greater than the distance between the crests. Normally the crest measurement exceeds the spine by $2\frac{1}{2}$ cm. The

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

external conjugate is reduced to 17 and the diagonal conjugate to 10. The sacrum is forced down into the pelvic cavity. The inlet is flattened, thereby contracting the antero-posterior diameter. The pubic arch becomes broad, and the tubera ischii are widely separated. We then have a short contracted true pelvis, and an enlarged outlet. This makes labor more difficult in the beginning and more rapid at the end.

The masculine group includes the masculine, the funnel, and the high assimilation pelvises. The masculine pelvis is so-called on account of its thick bones, its narrow pubic arch and its contracted outlet. The rami of the pubes form an acute angle instead of an obtuse one, and the tubera ischii are closer together than in the normal patient. The funnel pelvis has a normal or relatively enlarged inlet and a contracted outlet. The most important measurement is the transverse diameter of the outlet. In the contracted cases it is 8 cm. or less. Using 8 cm. as the standard transverse diameter of the outlet, Williams found 6 per cent of all pelves to be of the funnel variety. In the high assimilation pelvises the transverse processes of the last lumbar vertebra take on the characteristics of the lateral processes of the first sacral vertebra and fuse with them. The sacrum then has six vertebrae instead of its usual five. The transverse diameter may be narrower than the antero-posterior, and this side-to-side contraction extends downward and forms another variety of funnel pelvis. Many of these outlet contractions are not recognized until there is failure of the head to progress after full dilatation. This becomes embarrassing when after measuring the inlet, the patient has been assured that no instrumental assistance will be necessary. A simple palpation of the pubic arch and measurement of the outlet will give the desired information in advance of labor. In funnel pelvises the antero-posterior diameter must accommodate for the contracted transverse. But since a very small portion of the fetal head can enter between the tubera ischii in the anterior sagittal diameter which measures 5 to 6 cm., the posterior half of the antero-posterior diameter designated as a posterior sagittal, must enlarge and do the accommodating. This diameter is the distance

between the tip of the sacrum and a transverse line running from one tuber ischii to the other. If the transverse diameter is 8 cm., the posterior sagittal must be $7\frac{1}{2}$ cm., and increase in proportion as the transverse is shortened.

Neglect to note the size of the growing child in the last months of pregnancy is just as inexcusable as to neglect pelvimetry. A post-mature or over-size child produces the same obstetric complication in a normal pelvis as a normal size child produces in a contracted pelvis. It does not suffice to ask has the patient gone so many months since her last menstrual period? The only purpose of pregnancy is to develop a mature fetus, and after the fetus is mature, pregnancy should normally come to an end. If it does not we can often safeguard the patient by induction of labor. If one practices estimating the size and weight of the child in utero during the last months of pregnancy, and compares these weights and measurements with the actual delivery, he will after a while gain quite a knowledge of just how much the unborn child weighs and measures. "We of course cannot foretell the amount of elasticity or contractility of the particular fetal head, nor the amount of functional abnormality as to dilatation and relaxation that will develop."

If the fetal head does not engage during the ninth month in the primipara, we should immediately look for the cause. Disproportion is practically always present with non-engagement. The presence of a pendulous abdomen in a primipara means disproportion, and the cause should be sought. Induction of labor at early term and prematurely will eliminate the necessity of difficult instrumentation at the time of delivery. Especially is induction to be recommended when it can be instituted by means of castor oil and quinine without introducing a foreign body into the uterus.

"Post-maturity must not be forgotten in the care of multipara, since each succeeding pregnancy develops a little heavier fetus and each fetus is more reluctant to start on its trip through the birth canal."

All pelvic measurements are important, but the most essential are true conjugate, transverse of the outlet, and the

external conjugate. The spine and crest measurements are important in rachitis because a disturbance of the normal relation will almost make the diagnosis.

Vaginal examinations are not done during the last month of pregnancy, nor during labor, with one exception. When a case is not progressing satisfactorily, she is shaved, scrubbed, and prepared as for surgical interference. The sterile gloved hand is passed into the vagina and a complete survey made of the pelvis and the fetal head. This is often necessary in the test of labor cases. Such investigation is permissible in a hospital under the strictest precautions but should not be done until sufficient time has elapsed to permit the obstetrician to form an opinion as to natural outcome and the necessity for interference. Usually an anesthetic is necessary to gain accurate knowledge of existing conditions.

Sometimes in the conduct of labor we lose sight of the fact that if delivery is attempted by the vaginal route it must usually end that way. Frequent examination or examination without rigid aseptic precautions are contraindications to abdominal delivery. This is

one advantage of pelvimetry. If the patient has been accurately measured she can be given a test of labor without destroying the chance for cesarean section. Our policy is to give all patients with a conjugate over 8 cm., a test of labor unless otherwise contra-indicated.

Seventy-five per cent of slightly contracted pelves deliver themselves, the other twenty-five per cent require more or less assistance in the form of operative delivery.

However, nature will accomplish remarkable results if given rational assistance, and not hindered by too early interference.

In a review of our last 250 obstetric histories we found forty-one external conjugates between 19 and 20 cm., thirty-two between 18 and 19 cm., eighteen between 17 and 18 cm., eighteen true conjugates 8 cm., or above, but less than 9 cm.; nine transverse diameters of the outlet less than 8 cm.

Of the forty-one patients with external conjugates between 19 and 20 cm., four were delivered with low forceps, two median forceps, and one version.

REVIEW OF 250 OBSTETRIC HISTORIES

	Total No.	Low Forceps	Med. Forceps	High Forceps	Version and Extraction	Occiput Posterior Persistent	Induction of Labor	Manual Rotation and Forceps	Breech Extraction	Fetal Death
Ext. Conj. Between 19 and 20 cm.	41	4	2	0	1	0	0	0	0	0
Ext. Conj. Between 18 and 19 cm.	32	4	2	0	1	2	1	1	2	0
Ext. Conj. Between 17 and 18 cm.	18	4	1	0	0	1	0	1	0	0
True Conj. Less Than 9 cm.	18	5	1	1	0	2	0	0	1	1
Trans. of Outlet 8 cm. or Less	9	4	1	0	0	0	0	0	0	0

In the contracted outlet cases there were three prematures, one twin pregnancy, one post-maturity. The posterior sagittal diameter showed corresponding increase in all cases.

PELVIC MEASUREMENTS

	Normal	Generally Contracted (Justo Minor)	Simple Flat (Non-Rachitic)	Flat (Rachitic)	Masculine (Funnel)
Spines	26	23	25	25	26
Crests	29	25	28	25	29
Trochanters	31	26	30	29	30
Ext. Conj.	20+	18	18	17	19
True Conj.	9.5	8.5-9	8 $\frac{3}{4}$	8	9 $\frac{1}{4}$
Trans. Outlet	9	8	9	10	7 $\frac{1}{2}$

Of the thirty-two between 18 and 19 cm., four had low forceps, two median forceps, two breech extractions, one version, one induction. There were two persistent occiput posteriors. One terminated by version and extraction, the other by manual rotation and mid forceps.

The eighteen with external conjugates between 17 and 18 cm. required three low forceps and one mid forceps. One persistent occiput posterior was manually rotated and delivered by forceps. One fetus born alive showed both hydrocephalus and spina bifida.

Of the eighteen patients with conjugatae verae less than 9 cm., five were delivered with low forceps, one high forceps, one mid forceps, one breech extraction, three premature labors, one pair twins, two persistent occiput posteriors, one stillborn, one post-maturity, nine patients with contracted outlet. All had corresponding increase in the posterior sagittal diameter. One patient with transverse diameter of 7 $\frac{3}{4}$ and a post-mature fetus showed a posterior sagittal of 10 cm., and delivered herself normally. There was one mid forceps and four low forceps. Episiotomies were done in all cases preliminary to forceps.

There was one maternal death from blood stream infection following pyelitis. Only one fetal death resulted from contracted pelvis. This was in a primipara twenty-four hours in labor, the fetus showing signs of distress, forceps were applied in the superior straight. This patient has a justo minor pelvis and has since borne an eight pound baby without assistance.

In conclusion the following rules

have been laid down according to the degree of contraction.

Marked contraction of the pelvis with the conjugate of 7.5 cm. or less.

If seen during pregnancy or in labor, not infected, should have a cesarean section.

If in labor, potentially infected or with dead fetus, if forceps, will not be moderately easy—don't waste time, use the perforator.

When the measurements are almost normal but disproportion exists, the true conjugate is between 9 and 10 cm., always give a test of labor. Use the Walcher position to increase the antero-posterior diameter of the inlet, then apply forceps. If all attempts to deliver fail, craniotomy is the last resort.

Patients of the most difficult class have true conjugates of 7.5 to 9 cm.; they require obstetric judgment and obstetric skill. The more marked contractions, 8 cm., or less, are best delivered by cesarean section either elective or after a test of labor without examination. Lesser contractions (8 to 9 cm.), may be given a test of labor followed by forceps if engagement takes place. In other carefully selected cases labor may be induced prematurely after careful, repeated, examinations to determine the degree of disproportion.

1—A large percentage of the lesser contracted pelves will deliver themselves.

2—Version results are better after the fetal head has molded.

3—Timely induction in selected cases is better than waiting for labor and forceps.

4—Morphine and scopolamine are supports in a tedious first stage and hasten the dilatation of the cervix.

We feel that success in these cases is due to the recognition of pelvic contractions during early pregnancy; to careful observation of both mother and fetus in late pregnancy; to regulation of diet and weight; to induction of labor at early term with castor oil and quinine; to protection of the patient against exhaustion in the tedious first stage with morphine, and scopolamine; to securing good molding before using forceps; to the use of axis traction forceps when the head is above the perineal

stage; to the use of Potter's technique in versions; to deep episiotomies in funnel pelvis; and, finally, to always waiting for complete obliteration and full dilatation of the cervix before attempting any form of extraction.

REFERENCES

- 1—Burgess, H. C., *American Journal Obstetrics and Gynecology*—December, 1924, Vol. VIII, No. 6, p. 739.
- 2—Williams Obstetrics, 5th Edition, p. 839.
- 3—Harrar, James A., *American Journal Obstetrics and Gynecology*, March, 1923, Vol. V, No. 3, p. 246.
- 4—Mills, C. H. C., *Southern Medicine and Surgery*, February, 1925, Vol. 87, No. 2, p. 76.
- 5—Mary Elizabeth Hospital Case Records.

A PLEA FOR THE SEXUAL NEURASTHENIC*

LAWRENCE T. PRICE, M.D., Richmond

The purpose of this paper is to call attention to a large number of cases, who go from one physician to another seeking relief, but fail to get it, because the physician either does not take the time to analyze the case, or is not capable to administer the remedies.

For a number of years I have been thinking that for every ailment affecting mankind physically, there is a cause, and if the time and trouble would be taken with the patient the cause could be located in a large percentage of these cases and could be corrected. The cause need not by any means be pathological though in the majority of cases it also does exist.

I particularly refer to the young adult in his twenties, usually not married, who has some irregularity in his sexual ability. The variations are extensive and can hardly be classified into groups which are constant, because of the psychological factors entering into the problem. Each case when analyzed will have as the entering wedge, a well founded reason justifiable to the patient, whether it be from suggestions by association with other boys, seclusion, mode of living, social environments, education or occupation. The largest factor is the psychology of the individual and the degree to which the indi-

vidual has indulged his thoughts and practices. It is oftentimes amazing to what extent such a patient may go in the various ramifications of symptoms, and a still further stage the influence upon the individual, resulting in transforming him into an entirely different person socially, occupationally and even to the state of insanity.

The principal causes are masturbation, ungrateful sexual excitement and withdrawal during intercourse, with the resultant pathological and psychological conditions. Then there is another group of cases which have no pathological condition but are purely psychological. A typical case resulting from masturbation is as follows:

Case No. 1. White man, aged 37 years, single, holding responsible position in the office of a large steel plant. The patient was a well nourished, average size man and apparently perfectly healthy. He had successfully carried on his business affairs, and was a very active man in the church which he attended regularly. At the age of fourteen he began to masturbate as a result of association with other older boy friends; later, he refrained from sexual intercourse because of his religious views. He had continued to masturbate from one to four times a week up to the time he came under observation. Efforts to break himself of the habit was without avail because of a nervous

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tension, feeling of pressure and fullness about the neck of the bladder, and insomnia, all of which would be relieved after masturbating.

He desired to marry; he could not break himself of his habit; he was fearful of the inability to perform intercourse, and the insomnia and nervous conditions which he claimed he could not master, would unfit him for work. He was perfectly frank in discussing his habit and exhibited sincerity in his desire to overcome it. A general physical examination was negative, as well as his genito-urinary organs and urinary tract, except an elongated prepuce and marked hypertrophy of the verumontanum. Circumcision, treatment of the verumontanum and correction of his views regarding his condition completely cured the patient of masturbating; he has since married and found his sexual ability to be normal, and in due course of time an offspring arrived.

Case No. 2: From ungratified sexual excitement: Young white man, aged 22 years, single, fourth son of a prominent family, had been to a large college where he had been a letter man in athletics, stood well in his classes and was popular with his classmates and acquaintances. His conduct had been the same as the average young man in comfortable circumstances. While at a training camp a fellow student pointed out to him a man who was said to be a cannilinguist. This man's general appearance and conduct seemed to have made an indelible impression on the patient and his thoughts for weeks and months would revert to the loathsomeness of the habit and the mental picture of the man at the training camp. After returning home from camp the patient met a young lady who seemed to be infatuated with him and for weeks she made the opportunity for them to be together alone, when she would encourage all kinds of liberties except permitting sexual intercourse. This young man returned to school but found he could not apply himself to his studies; he could not force himself to his former athletic accomplishments, began to feel that he was out of place and gradually developed the feeling that his associates were shunning him. Then he arrived at the conclusion that his associates believed that he was a cannilinguist, and in this frame of mind he returned home from

school. The mental picture of the fellow-student at training camp was constantly before him, and that anyone could tell instantly upon seeing him that he was a cannilinguist.

He obtained a position in a large corporation's office where he performed his work very satisfactorily, but the mental picture of the fellow-student at training camp and the positive knowledge on his part that everybody thought him to be a cannilinguist was so fixed that when he saw two or more of his fellow-workers conversing he was positive that they were discussing him; this developed an almost uncontrollable desire to physically resent the supposed inference. He resigned his position and then was sent on trips for diversion, and everything possible done by his family and the family physician to get him out of a so-called depressed mental condition. He finally was taken to a neurologist who referred him to the writer.

The facts in this case were the psychological ramifications as a result of the impression left from his fellow student at training camp and the pathological results of the association with the young woman. The former was gradually and permanently removed from his thoughts as the pathological condition of the verumontanum responded to treatment. This young man in about four months time completely regained his normal physical and mental poise and has remained well.

Case No. 3. Married man, white, aged 29 years, real estate salesman. This patient had been married six years and is the father of two healthy children, youngest being fifteen months old. He complained of inability to have an erection when desiring to have intercourse with his wife, but could do so with other women. He was devoted to his wife, loved his children, happy in his home and contented with his position. This man had taken a long course of electro-therapy and had been given several long courses of medication by four separate physicians. He had forced himself to discontinue his illicit relationships and resorted to masturbation to relieve a sense of fullness and pressure about the perineum. A chain of nervous symptoms then developed, principally in the form of insomnia, loss of appetite and weight, frequency of urination, terminal hematuria and noc-

turnal emissions.

* This man was found to have a flabby prostate somewhat enlarged, verumontanum markedly congested and hypertrophied. A course of massage of the prostate, application of silver nitrate to the verumontanum, tonics internally and considerable reassurance that all would come around satisfactorily, resulted after six weeks in a complete restoration of the man physically and sexually with his wife.

In each of the cases cited, a pathological condition of the verumontanum was much in evidence, and in practically all of the sexual neurasthenics it will be found. It has been the writer's observation that the local and reflex irritation resulting from a congested verumontanum is the most prominent causative factor.

When one stops to consider the histology of the verumontanum and then to analyze the enormous number of conditions which will result from this one part of the human make-up not performing its normal duties it is obvious as to the results.

It is the abuse of this delicate control button which ultimately is the cause of the sexual irregularities. Any method or means by which the verumontanum may be caused to be irritated for any length of time may be reasonably put down as a contributing factor, such as acute and chronic gonorrhea, prostatitis, prostaticorrhea, cystitis, passing of instruments through the urethra, sitting upon seats that press against the

perineum, and then the various things which excite sexual thoughts, such as reading suggestive literature and books, observing suggestive plays and moving pictures, continued conversation on sex matters, masturbating, withdrawal during intercourse and ungratified sexual excitement.

The layman does not realize that this part of his anatomy is so delicately balanced and that it is easily caused to become hypersensitive in response to nature's call, and once imperfections have become established either actually or supposedly the results will be the same. Whatever the causative factor may be, from the patient's standpoint, it is usually overlooked or he does not realize that eradication of the evil whatever it may be, will in the beginning alter his difficulties, and it is not until after much time has elapsed that we see these cases, which is after pathological changes have taken place in the verumontanum and psychological impressions established.

It is hoped that this imperfectly presented paper will suggest to the members of this society the importance of psycho-analysis and the sympathetic indulgence by physicians of a group of patients, in whom it is most difficult to analyze their troubles, but the gratification of seeing these people gradually and permanently restored to a normal peace of mind and made into physically well individuals, is full compensation for the time and effort put forth.

"To the General Practitioner:—

"Give diphtheria antitoxin *earlier* and in *larger* doses.

Antitoxin is almost as safe as castor oil and both should be given in sufficient doses and *Early*. A suspicious, severe sore throat in a child requires antitoxin on the *first visit*.

"Dosage in children — for immunizing — give (simple exposed cases) 1,000 units; to suspicious cases of sore throat give, *at once*, 5,000 units; to positive cases give *at once*— don't wait—10,000 units; to laryngeal (croup) cases, never give less than 15,000 units.

"I have used diphtheria antitoxin for 31 years and have never seen it do any harm. On the other hand, I have seen cases die because of delay and too small doses. I believe the general practitioner fails to appreciate the importance of giving diphtheria antitoxin *AT ONCE* and in *LARGER DOSES*.

"W. P. NORTHRUP, Emeritus Prof., N. Y. Univ.; Pediatric Consulting, N. Y. Foundling Hospital, Presbyterian Hospital; Consulting, Willard Parker Hospital."

From N. Y. City Health Bulletin.

IMPORTANT RELATIONSHIP BETWEEN RHINOLOGY AND DENTISTRY*

H. C. SHIRLEY, M.D., Charlotte

There are probably no two fields of medicine and surgery that are more closely associated and more dependent one upon the other than are rhinology and dentistry.

Because of the close relationship that exists between these two specialties it is essential that, in order to give our patients the best results, we at least familiarize ourselves with the signs and symptoms of disease conditions in each other's fields.

Dentists are frequently called upon to examine patients because of localized pains in the head. These pains are so often due to infections in the sinuses that a familiarity with the signs and symptoms of sinus disease is necessary, in order that the proper and early diagnosis may be made. Fortunately a fairly accurate diagnosis of the presence or absence of a marked sinus infection can almost always be made from the history alone. There is no medical condition that can be more accurately diagnosed from the history than can an acute sinus infection.

I want to go over briefly the common symptoms of the typical case. In the first place, I may say that a headache or pain that is localized in the back of the head is in the vast majority of cases not due to sinus infection. This condition practically always causes pain in the front part of the head.

Upon questioning the patient with an acute sinus infection, we find the pain of which he complains has almost invariably been preceded by a cold in the head of several days' or a week's duration. The patient will tell you that after he had had the cold for a week or so he began having pain in one or both sides of the head. This pain is associated with purulent nasal discharge coming, of course, from the side in which the discomfort is most marked. The pain is always worse in the morning and is located usually in and above the eye and frequently extends into the upper teeth on the same side.

All of the teeth on the affected side may be sore, on edge, too long or sensitive; but usually the first and second molars are the seat of the most marked pain. This pain is exaggerated when the patient stoops over.

It is important to remember that the pain of an acute antrum infection is most marked over the eye and not over the antrum itself. The tenderness over the antrum is a rather inconstant finding, much less constant than the pain over the eye and in the teeth. The patient who states that he has had a cold in his head for several days and now has pain in the upper teeth and over the eye and marked discharge from the same side of his nose, has an antrum infection. These symptoms are so definite and constant that we can almost regularly make the diagnosis from the history alone.

If acute sinus infections are diagnosed properly and treated early, the pain can always be relieved in a few days, and the antrum will not become the seat of a chronic infection. Chronic infections of the sinuses are always accompanied by a microscopically demonstrable, and often grossly demonstrable, osteo-myelitis.

This secondary osteo-myelitis frequently results in softening of the bone making up the floor of the antrum. Because of this it is easy to pull away a large or small portion of the floor during the extraction of upper teeth. This also happens occasionally during the extraction of infected upper teeth, the infection having spread to the surrounding structures with the resultant destructive process.

Carcinomas of the antrum are usually located in the floor about the molars. This results in very marked destruction of the maxilla about the molars and, also, in extensive softening of the hard palate. I have recently operated upon two patients for carcinoma of the antrum, whose chief complaint was nasal discharge and two or three loose upper teeth. Occasionally the antrum is broken into during the extraction of a tooth

*Read before the Second District Dental Society of North Carolina, Charlotte, March 8-9, 1926.

that extends unusually high up into its floor, but more often the opening is caused either by a disease process about the tooth socket itself, or bony destruction secondary to disease within the antrum.

When an opening has been made into the antrum the course to be followed should depend upon the size of the opening and the presence or absence of infection within the antrum. Upon this largely depends the success or failure of the after treatment. Most of these fistulas will close spontaneously if they are not excessively large and if there is no infection in the antrum. If no infection is present, the antrum should be washed out through the fistula with sterile saline at once and subsequently at daily intervals, gradually allowing the tract to heal over. I advise very strongly against the use of packs or drains of any kind. They form excellent means for transportation of infection into the antrum and serve to keep the fistula open while epithelium grows up from the oral mucous membrane along the tract. When this tract has become epithelized, as will be evidenced by a smooth shiny appearance, all possibility of spontaneous closure has been foreclosed, and the tract can only be closed surgically.

If the antrum is found at the time the opening is made, to be the seat of infection, as will be evidenced by the presence of pus, or more important, by the presence of polypoid mucous membrane, the chances are the opening will not close spontaneously. When this disease condition is known to be present in the antrum, the fistula itself should not be treated. The underlying sinus infection should be eradicated at once, and if this is done early before the fistula has become epithelized, it will close spontaneously following the eradication of the infection.

Some fistulas are so large that the sides will not approximate and they have to be closed surgically. This is usually a simple procedure and is done by bringing a flap of the buccal mucous membrane across the opening and anchoring it firmly in place. This is done under local anesthesia.

Foreign bodies are occasionally gotten into the antrum, and when this happens they should be removed as soon as possible. By far the most common foreign body found in the antrum is a tooth root that has been accidentally pushed into the antrum during its attempted removal. When this happens the antrum should be opened under local anesthesia through the canine fossa. The foreign body can then be removed under direct inspection, the antrum closed and no untoward results will follow. The antral mucosa is particularly sensitive to the presence of a foreign body, and if it be not removed early, the mucous membrane becomes infected and eventually polypoid and the train of symptoms associated with a chronic sinus infection follow.

I could not close my paper without touching briefly upon the importance of infection in the mouth giving rise to secondary infection in the pharynx and lower respiratory channels. Time will not permit me to go into details in regard to these conditions.

Infections in the tonsils, both acute and chronic, can often be traced to a primary focus about the teeth; and it is needless to say that the many symptoms cannot be relieved until this primary focus is treated. It is not uncommon to find acute tonsillitis follow an acute dental abscess, and frequently the same organism can be isolated both from the abscess and the tonsil crypts. Many cases of chronic pharyngitis and laryngitis are secondary to dental infections and resist all forms of treatment until this infection is recognized and eradicated.

Pains of neuralgic origin in the ears and mastoids are frequently the so-called reflex neuralgias that are due to impacted third molars, usually uppers. I have seen one patient who had a mastoid operation on both sides because of pain in his ears. This pain persisted after the operation and it was only relieved when a dental consultation revealed the presence of impacted upper third molars. The history did not indicate that there had ever been any mastoid infection.

THE PRE-OPERATIVE AND POST-OPERATIVE TREATMENT OF PROSTATIC DISEASE*

R. L. PITTMAN, M.D., Fayetteville

PRE-OPERATIVE TREATMENT

It is in the pre-operative treatment that most has been accomplished in reducing the mortality of prostatectomy and making the operation safe and practical for all cases. I wish to divide the pre-operative treatment into two parts; first, treatment of the patient's general condition other than the genito-urinary tract, and second, that pertaining only to the genito-urinary tract.

There is no operation that the urologist or general surgeon is called upon to perform that requires a more thorough study of the patient's general condition than that of prostatectomy. Practically every one of these patients is well advanced in years and naturally has a great handicap when surgery is to be resorted to. For this reason the writer felt that a presentation of these facts was justifiable at this time, if we hope to reduce the operative mortality still more.

Cardio-vascular disease is very common in cases of prostatic hypertrophy. The well recognized cardio-renal relationship would lead us to expect it when 43 per cent of the cases have renal impairment below 50 per cent phthalein. Arteriosclerosis is so very common as to be negligible except in the very severe grades. Even with a history of previous cerebral attacks of apoplectic strokes it is possible to carry out prostatectomy successfully.

Although high blood pressure is recognized as a signal for thorough study and great care at operation, it is not regarded as a distinct contra-indication, and usually by rest in bed, sedatives, regular diet and relief from worry and excitement, such patients can be operated upon with reasonable safety although hemiplegic attacks are frequently reported during convalescence in sufferers from extreme high blood pressure.

Statistics reveal that practically 50 per cent of all cases of prostatic hypertrophy coming to operation suffer from some form of cardiac disease. All such

cases should be under the care of an experienced clinician, whereby the cardiac condition can usually be improved under proper treatment to where operation can be performed with reasonable safety.

Respiratory infections are extremely important to the surgeon and in the face of an acute inflammation of the nose, throat, trachea, bronchi or lungs, we should always delay operation until the infection has cleared up. Operation should never be performed if the patient has any elevation of temperature from such a source. If operation is performed under such conditions, spinal or sacral anesthesia is preferred.

Gastro-intestinal tract. In reviewing the literature, I find very little mention made of the condition of the gastro-intestinal tract. To my mind, this is a great error. I make it a rule never to operate upon a patient with any acute disturbance of the gastro-intestinal tract. The patient's appetite is very important. I think to have your patient eating well for several days before operation is very important. The night before operation, the patient is given his usual supper and no purgative whatever that night. This is done to prevent disturbing the patient the night before operation, thereby insuring him a good night's sleep, and the patient feels fresh and rested next morning for the operation, the only preparation being an enema before going to the operating room.

Nervous System. It is very important to make a thorough study of the patient's general nervous system including all tests for cerebro-spinal syphilis, paralysis agitans, locomotor ataxia and other forms of spinal disease which interfere with the patient's general condition and very frequently alter the function of the genito-urinary organs. Patients with nervous disease stand operation very poorly and often never regain absolute control of urine.

This brings us to a consideration of the patient's condition referable to the genito-urinary system. This can best be divided into three main parts: First,

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

the duration and amount of obstruction; second, the care and treatment of associated infections; third, the restoration of impaired renal function to a point compatible with major surgical measures.

DURATION AND AMOUNT OF OBSTRUCTION

The duration of the obstruction is of course largely determined by the history and use of cystoscope. The extent of the obstruction is ascertained by the amount of residual urine present. I will not attempt here to discuss the question of what the exact nature of the damage is which comes upon kidneys as a result of prostatic obstruction. However, a study of the following six cases shows that a patient who has a large amount of residual urine generally has badly impaired kidneys as shown by both renal and blood tests.

The situation may be summarized as follows: (a) Renal impairment is proportional roughly to the back pressure in the ureters. (b) This is characterized by dilatation of ureter, pelvis and calyces and thinning of renal cortex. (c) It is most common and most pronounced with large residuals in patients never catheterized. (d) It is less pronounced in large residuals intermittently catheterized. (e) Marked impairment may occur with residual urine, less than 400 cubic centimeters, but not so frequently. It occasionally occurs with small residuals, even less than 100 cubic centimeters, probably due to frequent and prolonged urination during which the ureters are closed and pelvic dilatation occurs. Therefore, residuals of more than 190 cubic centimeters should have constant drainage.

INFECTIONS

Pyelonephritis is the most common site of infection complicating the preparatory treatment for prostatectomy. Usually of urethral origin, it is carried from the prostatic urethra through the blood stream to the renal parenchyma where in fatal cases multiple small abscesses frequently develop. In many such cases running temperature colon bacilli can be cultivated from the blood stream as pointed out by Cabot. Its course is usually self limited, lasting from four to seven days with decrease of temperature, etc. Many drugs, including mercurochrome, methylene blue, acriflavin, urotropin and hexyl-

resorcinol have been employed in its treatment. Hexylresorcinol has been found to be the most efficient of all the drugs. Mercurochrome given intravenously occasionally yields striking results. The febrile reaction subsides immediately in some cases, but in others it is extremely toxic and fatal cases have been reported. For this reason its routine use is not recommended.

RESTORATION OF IMPAIRED RENAL FUNCTIONS

The restoration of impaired renal function sufficient to permit of prostatectomy is naturally the most important aspect of the preparation of patients with prostatic hypertrophy. Many of these patients endure urinary obstruction until the renal function as determined by the phenolsulphonphthalein test has reached the vanishing point and the urea content of the blood has often gone over 300 milligrams for each 100 cubic centimeters. The establishment of adequate drainage is first undertaken. In cases of complete obstruction with acute retention, and frequently with a large chronic residue, gradual emptying of the bladder is imperative. Even fractional emptying of the bladder, removing an ounce or two at a time, is not as satisfactory as gradual and continuous drainage of the bladder. Rapid emptying of the bladder produces, quite frequently, acute urethral fever with edema of the genito-urinary tract, and the rapid onset of coma, which often proves fatal. Several methods have been advocated for the gradual emptying of the bladder. The simplest and best, I think, is the one described by Van Zwaluwenburg. By this method, the urethral catheter is attached to a long tube filled with fluid and empties into an elevated receptacle at the foot of the bed. The height of this receptacle is determined by the pressure within the bladder, and as this gradually diminishes as a result of overflow, the receptacle is lowered. Usually from three to five days are sufficient for complete emptying. After the bladder is emptied, the elimination of retained toxic substances throughout the body is accomplished by the giving of large amounts of saline fluid and elimination by sweating, purgation and diuresis. I am satisfied that the greatest means employed for the restoration of kidney function in the history of

prostatic surgery has been accomplished by means of instillation into the body of large quantities of saline solution. This can be done by mouth, rectum, hypodermoclysis or intravenously. The latter, I think, is the most satisfactory of all methods. As regards the quantity a patient can safely assimilate, it is hard to estimate. The quantity often seems tremendous that a patient can endure. I have one case that was given from 1000 to 1500 cubic centimeters every day for 63 consecutive days. This was a man 76 years old who was more or less uremic during the entire time, with a high urea content of the blood and a low phthalein output. This patient was unconscious during a greater part of the time; a suprapubic drainage was introduced early in the treatment and on the forty-eighth day a prostatectomy was performed with a complete recovery. In this case, the blood nitrogen was reduced from 280 milligrams per 100 cubic centimeters of blood to 40 milligrams per 100 cubic centimeters of blood and the total phthalein output reached 54 per cent and at first was only present by a very small trace. Cardiac disease is not a contra-indication to intravenous administration of fluids in large amounts. Too much cannot be said for the benefit derived from this form of treatment and I believe it is one of the triumphs of modern therapeutics. The time usually consumed in giving 1000 cubic centimeters should be from 20 to 30 minutes. The same vein can be used a number of times. Under this form of treatment the amount of urinary infection usually diminishes rapidly.

In addition to the above treatment, the patient is put daily in a hot pack and a profuse sweat induced. Under this form of treatment, the urea content of the blood usually diminishes in direct proportion to the duration of prostatic obstruction. If it has been of long duration 10 milligrams a day is the average amount of reduction. If of acute onset, 50 to 100 milligrams is not unusual. When the urea content of the blood has decreased to approximately 50 milligrams for each 100 cubic centimeters, the advisability of a one or two stage operation may be considered. If the patient tolerates a urethral catheter well, the preparation may continue with this form of drainage until the

urea content of blood is below 40 milligrams. If the decrease has been slow and the patient's general condition poor, with considerable loss of weight and strength, it is safer to perform a cystotomy and postpone the operation for several weeks.

It is best to allow such a patient to return to his home, for under home environment and accustomed food, he gains far more rapidly than in the hospital, once adequate drainage has been established. This may cover a period of weeks or months. The patient thus having been satisfactorily prepared for operation by the various means as outlined above, the question arises as to what operative procedure shall ensue.

You will notice from the title of this paper that it is not my desire to enter into a discussion of the indications and operative technique of the various operations. At this point, I do wish to say, however, that suprapubic cystotomy for drainage should not be performed until the in-dwelling catheter has been given a thorough trial, and the patient has proved an intolerance for it. I prefer the catheter drainage by all means when practicable. Suprapubic drainage has a mortality rate of its own from two to four per cent. This was true in the series of 1049 cases reported by Hugh Young in which catheter drainage was practiced in all cases where practicable. His statistics are corroborated by many other prominent urologists. The one stage operation under adequate preliminary preparation is now the operation of choice, whether this be suprapubic or perineal.

POST-OPERATIVE TREATMENT

This is more or less a continuation of the pre-operative treatment which consists of careful attention to the circulatory and respiratory system with careful attention to the gastro-intestinal tract. I think it is always well to cater to the appetites of such patients and try to give them as much palatable food as they will take without discomfort. Patients who eat well seem to do better in every respect. They retain their strength, get out of bed sooner and make a more rapid and satisfactory recovery. The routine and almost daily examination of the urea and blood nitrogen should be made in the laboratory and if this shows a tendency to increase,

Liquids should be forced as before the operation. Upon the slightest indication of approaching uremia, liquids should be pushed to the limit with diuretics and hot packs, thereby increasing the patient's elimination in every way possible.

I do not think these patients should be forced to sit up too soon. Early purgation and enemata should be avoided for fear of dislodging an embolus which may prove fatal. The post-operative care of the wound should consist of the prevention of infection and preservation of asepsis in the wound as near as possible. The tube and gauze are usually removed at the end of 36 or 48 hours. It has been my experience that irrigation of the bladder daily with boric acid solution, or acriflavin 1 to 8000, will often prevent infection of the wound and clear up pre-existing infection in the bladder. The passage of a catheter and irrigation of the urethra with the same solution, or mercurochrome, is advisable in cases of severe infections such as cystitis, seminal vesiculitis, epididymitis, etc. The routine passage of urethral sounds I do not think advisable unless there is delayed union of the operative wound and no tendency of passage of urine through the urethra, which would mean more or less urethral obstruction at the site of removal of the gland. When a sound is passed I do not think it should be passed further than the membranous urethra, as it is at this point that obstruction usually exists. My reason for not advocating the passage of sounds is due to development of epididymitis following such instrumentation in my hands. The statistics of many others show the same to be true in their experience.

SUMMARIZING

What I have tried to bring out in this paper can best be illustrated by quoting the statistics of a recent report of the Mayo Clinic: In 1773 prostatectomies,

50 per cent of all deaths were due to pre-existing and co-existing disease; that is, cardio-vascular-renal disease and pulmonary lesions. Four per cent were due to surgical accidents; that is, hemorrhage and shock. Forty-six per cent were due to post-operative complications such as pulmonary complications, general sepsis, embolism and peritonitis. Seventy-five per cent of the deaths occurring in that group of patients considered the best surgical risks, due to the fact they had only small amounts of residual urine, and no demonstrable renal insufficiency, etc., and in the prostatectomies undertaken without preliminary treatment, were due to renal insufficiency, cardio-vascular disease, chronic pulmonary disease and diabetes.

Thirteen deaths were due to post-operative pulmonary embolism. Eleven dying from this cause had been considered good surgical risks and were operated upon without preliminary treatment. That the occurrence of pulmonary embolism is beyond question. In other words, the ship to lack of preliminary treatment is nary embolism has a distinct relation-mortality rate following prostatectomy aration of patients by urethral catheter in the best surgical risks without preparation approaches closely that of the exceedingly poor risks requiring cystotomy, and is twice that following pre-drainage.

The necessity for preparation in all cases is apparent, and successful management demands drainage of the bladder preliminary to prostatectomy for at least 10 days and often for a longer period.

With our eager pre-operative study of the patient's condition, we must not consider our task ended on completion of operation in the operating room. The patient's post-operative convalescent period requires equally as thorough and constant supervision of his general physical condition.

Treatment of Hookworm Disease in Pregnant Women

During some fifteen months in which more than a hundred thousand of the general Paraguayan population were treated with a combination of carbon tetrachloride and oil of chenopodium by the Campana Sanitaria, all pregnant women were treated with carbon tetrachloride alone in dosage of 2.4 cc. with simultaneous purge of magnesium sulphate. The data presented show that pregnant women in all months may be safely treated with carbon tetrachlo-

ride without the production of dangerous symptoms in the days immediately following treatment. Although five abortions occurred in sixty-three patients followed to term, it is not apparent that there was a causative relationship existing between previous anthelmintic treatment and such abortions. Pregnancy has been removed as a contraindication to anthelmintic medication in the treatment of more than a hundred thousand of the general population without untoward results.

A. M. A.

DISCUSSION OF PAPERS OF DRS. GARNETT NELSON and MORRISON HUTCHESON*

DR. NELSON'S PAPER

Dr. Wm. deB. MacNider, Chapel Hill:

I believe that is about one of the best papers I have ever heard, and one of the most practical and helpful. I often wonder why people are interested in glucose, and why they talk about it all the time. They do not talk so much about other things that go on in the body. I reckon perhaps the reason they do is because it is natural. I wish I could approach this paper from a clinical point of view, but I cannot do that because I do not do clinical medicine, and I miss it very much in my isolation at Chapel Hill, where I cannot see sick people.

The statement Dr. Nelson made that interested me particularly was the influence of glucose on the utilization of fats. Fats are mighty interesting things. Some of you, I am sure, have heard part of the statement I am going to make, and if so I hope you will excuse me for repeating it. I became interested sometime ago in investigating anesthetics, and why the liver did not get anesthetized, or the retina, or the bony tissue; why the anesthetic hooked up with nerve tissue and did not anesthetize other cells. My opinion was that it did anesthetize those cells. Perhaps some of you have had this experience, if you gave an anesthetic to old people (my old people are old dogs), they stopped making urine and never made any more. They quit. Right often a pregnant animal, especially an animal that is old, will do the same thing. The anesthetic does something to the renal cells and does the same thing to the liver cells, and they stop functioning. What we did in the case of these different animals was to take out a piece of the kidney under local anesthetic and study it. We found that in an old animal, a pregnant animal especially, there was a tremendous increase in the amount of storable fat material in the kidney and in the liver. But if you give an old animal, or a

middle-aged or young pregnant animal that has deposited this fatty material in the kidney, twice a day before the anesthetic and the morning before the anesthetic, a solution of glucose, and then take out a piece of the kidney and study it, to your amazement there is much less fat there, and sometimes none except in the loops of Henle. After you have done this you can go ahead and give the same anesthetic (ether—I do not give even dogs chloroform any longer) for the same length of time, and they do not develop any renal injury. They continue to make urine, and they respond to those diuretic substances to which, if they had not had the glucose solution, they would not respond. I think the explanation for that is the one that Dr. Nelson has already given in this perfectly splendid paper. You use the glucose, and through the metabolism of glucose you burn the fats—not all of them, but you tend to bring any abnormal accumulation of fats back toward the normal, and when you decrease the affinity of these tissues for the anesthetic they bind less of it. It fails to exert its same toxic effect, and in that way you protect the tissue against the toxic effect of the anesthetic. My feeling is that people who are to be anesthetized, especially old people, who are growing toward that stage of the game where they are going to quit oxidizing,—quit burning, and animals in the same state, pregnancy particularly, ought to have some glucose before the anesthetic, to increase their burning capacity and to diminish that material which will increase their susceptibility toward the anesthetic, namely, an accumulation of fat or lipid material.

There is nothing new, I reckon, under the sun. You know they have just started giving Marathon runners sugar; they have candy stations for the runners. I happened to read, the other day, King Henry IV. He was talking about somebody and said, "The only thing he can do is to eat sugar (candy) to increase his wind." Isn't that interesting? And we have thought we just dis-

*Papers published in March. Discussions not in hand at that time.

covered it. I think the use of glucose a more natural thing to do than to fill somebody up with an alkaline solution. Maybe we can use glucose too much intravenously, but I think it is a powerful therapeutic agent. It certainly can protect individuals in a good many pathological states and increase their ability to burn difficult things, such as fats and proteins.

It is important to know when you get too much glucose, determining it in terms of the kidney threshold. As soon as it appears in the urine you ought to stop it; for if you do not, it will do harm. I am quite sure that is right. You know diabetics do this for months. It is the same way with animals. I have given glucose by mouth and also in the vein until it appeared in the urine. I have kept that up for several weeks and then killed the animal, and the tissues are histologically all right. You are giving an organism a normal thing, but a little too much of it. It is not like giving something abnormal. On the other hand, I do not see much sense in giving so much glucose that you have the urine loaded with it. I do not think marked glycosuria, as such, does any tissue damage.

Dr. J. Morrison Hutcheson, Richmond:

I am sorry Dr. Nelson did not have time to complete the reading of this interesting paper as there are some practical questions that I am sure many of us are now considering. I should like to ask him how he determines the indications for the use of glucose and, also, if the administration is checked by the clinical appearance of the patient or by laboratory tests, particularly blood sugar level and acid-base equilibrium.

Dr. M. Pierce Rucker, Richmond:

I was very much interested in Dr. Nelson's paper because we use glucose a great deal in obstetrics, and it is really remarkable how quickly you can get an effect by giving glucose per rectum. I recently had a case in which this was shown very clearly. The patient was being aborted therapeutically for pernicious vomiting. She came to the hospital in extremis. I had a bag in her uterus to bring on labor, and was getting a tracing of uterine contractions. I gave her a half c.c. of pituitrin and obtained a typical pituitrin effect.

In two hours I gave another dose, and it had no effect; then we gave glucose solution per rectum, and got a beautiful pituitrin effect in several minutes. I was very much surprised at the way in which the glucose restored the uterus so that it would react to the pituitrin. Dr. Nelson, closing:

I cannot go into this subject at all fully in any one paper; it is utterly impossible to do it. It covers such a wide field.

Referring to Dr. Hutcheson's question, I think I can answer him most briefly by merely stating the indications for glucose as they appear in the paper.

As to the control of the use of glucose, when you know whether you have enough, I think the clinical control is the main thing. Of course, it is a great advantage, if you possibly can, to control it with your blood sugar and by examination of urine, but the clinical picture is what you are after. Take the vomiting of infancy, when the child is dehydrated, with sunken fontanel, if you give glucose you will convert the clinical picture into one where the child will stop vomiting and will go ahead and begin to eat.

Dr. MacNider's remarks I appreciate very highly.

As to the cause of hypoglycemia, one cause, as cited in the paper, is prolonged muscular activity, as in a Marathon race.

The question of anesthetics is also gone into slightly in the paper.

Referring to Dr. ———'s remarks about the diabetic case, and the use of glucose and insulin, I don't believe the glucose did a particle of good. I do not see a bit of sense in giving a diabetic glucose, for he has too much sugar already—to be sure, the wrong kind of sugar. I think insulin is the thing to give there. I do not know of anything that substantiates the practice that we see reported in the journals over and over again, in the diabetic comas of giving glucose and insulin. I think the whole benefit you get there is from the proper use of insulin itself.

I do not want anybody to be timid about the use of insulin. It is a thing the country doctor can give. Of course, you can get symptoms of shock with normal blood sugar if you bring the blood sugar down too fast. It is a

question of speed as well as quantity in correcting the blood sugar in the diabetic, or in hyperglycemia.

DR. HUTCHISON'S PAPER

Dr. Garnett Nelson, Richmond:

The thing that interests me most in Dr. Hutcheson's paper is his allusion to the use of quinidin in the fibrillation that accompanies toxic goiters. We all know that in acute exophthalmic goiter we have cardiac conditions that seem to be merely disturbances of the heart, where the pathology in the heart is not a matter of any great significance, but these disturbances manifest themselves chiefly as fibrillations of the auricle. But the cardiac condition that causes us most anxiety in our goiters is the toxic adenoma, the goiter of long standing that becomes toxic. Cabot remarks that the exophthalmic goiter is not a matter of so much importance as the chronic simple goiter that manifests itself in cardiac changes. We are embarrassed in not knowing how to manage these cases. We cannot map out any simple rules—thou shalt not do this or shalt do that. I feel pretty safe in the course I follow at present in all goiters, whether it is the exophthalmic goiter or the chronic cardiac disease of the simple goiter that has become toxic—toxic adenoma. I feel that the use of quinidin is correct. I feel that the fibrillation itself is the thing that should be corrected, and the use of quinidin, along with digitalis and whatever other drugs may be indicated, is the proper thing. Certainly in fibrillating auricle that is accompanied by an arrhythmia of the ventricle, when the impulses reaching it are so irregular and so improperly timed that the circulation is disturbed, effort should be made to correct the fibrillation of itself.

Dr. T. Dewey Davis, Richmond:

My experience with quinidin in fibrillation, in properly selected cases, has been very satisfactory. Dr. Hutcheson mentioned the possibility of its use in

frequent premature contractions. I should like to mention a case I saw about a year ago. This was a young girl, sixteen years of age, who was accidentally found to have a very irregular pulse. She came up for examination, and it was found that every other heart beat was a premature contraction; in other words, she had a constant coupling of the pulse. Electrocardiograms showed that these contractions were supraventricular in origin but outside the sinoauricular node. It was decided to use quinidin, and we used 3 grains three times a day for 2 days, then 6 grains three times a day for three days. She had no untoward effects, and it had no effect on the irregularity. I just wanted to say that quinidin was without effect in this particular case. It seemed that since the impulses in this case were above the auriculoventricular junction, the quinidin might have had some effect, but it did not.

Dr. Hutcheson, closing:

Dr. Nelson has brought out very well the effect of quinidin in a certain type of thyroid case. It probably does no more than change the rhythm, but this change is a distinct advantage to the ventricle and often results in improved efficiency.

In the case Dr. Davis mentioned, he used only six grains of quinidin three times a day. That is an extremely small dose. Possibly if he had used more it would have had some effect. Quinidin is like digitalis in that if one simply gives a conventional small dose he is likely to get no effect at all. Not many cases of premature contraction require any drug at all, as the resulting irregularity does not diminish cardiac efficiency. Treatment that is unnecessary may do harm by focusing attention upon a harmless disorder. In the exceptional case, where the premature contraction is so frequent or distressing to the patient as to require attention, quinidin is the best drug to use, but must be given in sufficient amount.

SKETCH OF ST. LUKE'S HOSPITAL, RICHMOND

St. Luke's Hospital was established in 1882 by Dr. Hunter McGuire. It was one of the first private hospitals to be established in the South and under the direction of its illustrious founder it soon gained an enviable reputation.

The strong personality of Dr. Hunter McGuire alone would have taken any institution far along the road of progress, but this rugged pioneer possessed other outstanding qualities which compelled success. Unlike many men of his time who lived on the dividing line of a great surgical era, he wasted no time in the forlorn fight of the older order in its bitter rear guard action against the new. He rather swung into line with the new advances eagerly seizing what was good and winnowing out the false or the impractical.

It was in this atmosphere and environment that he trained his son, Dr. Stuart McGuire, to relieve him of the burden and to carry on his great work when he should be called to his reward. The physical beginning of St. Luke's Hospital was a very modest one. It was first located in the Spottswood House on Ross and Governor Streets, just back of the Governor's Mansion. Changes and additions soon brought this up well above the standards of its day. But, looking ever to the future, in 1900 a new modern hospital was erected on the corner of Grace and Harrison Streets, in the growing West End of Richmond. This building has been enlarged and remodeled from time to time, first with a new upper story, then with a new wing along Grace Street, keeping it always in the forefront of progress.

For forty years, with the exception of the years 1918 and 1919, when its staff enlisted in the Army and went to France, it has functioned continuously

as a private Surgical Hospital, first under Dr. Hunter McGuire, and after his death under the management of Dr. Stuart McGuire.

St. Luke's Training School for Nurses, established in 1887, was the first school of its kind in the South. It has graduated hundreds of young women who have gone to many positions of prominence and trust throughout the United States. The character and standing of this School for Nurses has always been a matter of pride to its founder, his son, and the present management.

In 1924 the McGuire Clinic was organized and took over the management of the hospital. The members of the clinic staff representing the various branches and specialties of medicine and surgery now became the staff of the hospital. The large building adjoining the hospital on the west, formerly used as a Nurses' Home, was remodeled into a modern Clinic Building with every facility of office and laboratory. Three buildings to the west of this were acquired and refitted as class-rooms and dormitories for nurses. This gives a continuous stretch for the hospital and its adjunct buildings of half a block along Grace Street looking west.

The immediate proximity of the clinic to its hospital minimizes time, equipment and personnel. This ready access makes it extremely easy for the patient in the hospital requiring office treatment, and makes frequent visits to the ill patient possible with little loss of time to the clinic staff.

St. Luke's Hospital has not changed its general policies nor its ideals. It has expanded its field of usefulness and service to include not only surgery but medicine in all its branches as well.

PRESIDENT'S PAGE

A. J. CROWELL, M.D.

In the last issue of the Journal we requested the members to send in suggestions for plans which would stimulate a greater interest in the Tri-State and increase its usefulness, in order that these ideas might be inaugurated by the President.

While awaiting your suggestions, I will give you a plan I have in mind to bring the advantages of the Society before each County Medical Society in the three States. This can be done by a process of deputation from the largest and most centrally located town in each Councilor District. To illustrate: There are eight County Medical Societies in the Seventh North Carolina Councilor District. It should be easy to get enough volunteers from one or two of these societies to send a delegation to every society in the District during the year. They could go in pairs; this would require only eighteen men, and each pair would be called upon to attend only one county society meeting each year. Such an outing would be both pleasant and profitable to them.

Of course it will be necessary to convince the members of the Tri-State Medical Association, if they are not already convinced of the wonderful advantages it offers and its possibilities

before they go out to deputy the County Medical Societies. I am already convinced and you may be; but it is necessary that every man who does this deputizing work should realize the opportunities it offers if we are to get the best results possible. Here is an important function to be performed and should the President and his Councilors decide upon such a plan, I ask for an open door and a sympathetic hearing for the President or whoever may be designated to bring the claims of the Association before the District or County Society Meetings.

The President will be glad to attend the State meetings or have a representative present to solicit their cooperation in making this the most advantageous Society to all medical men in this section of the South.

Personally, I believe we should foster an intensive post-graduate course of one week's duration each year. This can be made an outstanding feature of the Society and should be held at a different time and in a different State from that of the regular Society meetings. I will give in detail in the next issue of the Journal my ideas as to how such a course can be conducted.

SOUTHERN MEDICINE AND SURGERY

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usable medical knowledge.*

Periodic Physical Examinations of Apparently Healthy Persons

Probably there is no one subject on which so much is being written by medical men at this time. It is evident that much good can come of having defects and tendencies detected, incipient chronic disease diagnosed, and the deviations from the normal in the individual which do not constitute disease established and recorded.

This latter function of an examination of a person in health does not appear to have attracted the attention which it merits. Many times do we observe certain symptoms in the course of an examination of a patient, and wonder whether they are a part of the disease which has been affecting the patient for only a few days, or belong to the period of perfectly healthy functioning of his organs.

Far too many find it impossible to distinguish between the abnormal and the pathological. To say that a certain person is abnormal conveys no information; for the normal person is a purely hypothetical individual. A child who has one eye blue and the other brown is the very quintessence of abnormality; but surely not even the most earnest stickler for the normal would undertake to bring it about in such a case by blueing the brown, or browning the blue! Nor would it be reasonable to assume that this highly abnormal child should be regarded as defective,—mentally or physically.

We sometimes have a diagnosis made, or largely influenced, by finding evidences of enlargement of some internal organ. We do not know,—and it would be of tremendous importance to know,—whether such an organ is enlarged or merely large. Men of the same size have hands, feet, eyes and ears of a wide range in size and shape: the same is found true of internal organs at operation and necropsy: why assume such rigid boundaries for the heart, liver, spleen, tonsils, and prostate, and condemn every organ found larger than the average?

Accurate records of the findings made at the examination in health would supply valuable data for the guidance of the medical attendants on the examinees in subsequent illnesses; and the summarization of the findings in thousands and millions of apparently sound persons must afford such evidence of the wide range compatible with health as can not be ignored.

The stock argument for these periodic examinations, that automobiles and watches should be gone over at regular intervals, is an attempt at analogy which is by no means convincing. A great many users of automobiles and watches have found it far more satisfactory to allow no monkeying with these articles so long as they discharge their functions and show no symptoms, and these contrivances are not amenable to suggestion. Neither Mesmer Coue, nor Mrs. Eddy could harm or help a Packard or a Hamilton by the passage of hands, reciting "day by day," or the denial of the existence of matter and pain; while all of us know of patients who were leading happy and useful lives until some life insurance or lodge examiner found a perfectly innocent heart murmur or a trace of albumen and thus converted them into permanent invalids.

A great deal has been said about the shortcomings of the general practitioner as disqualifications for the making of these examinations. Who is responsible for this? And where may he obtain reliable guidance? In the Bulletin of

the A. M. A. for January, in an article dealing with periodic examinations, of one case it is said, "Physically, the only defects noted were 17 pounds underweight and an inconstant systolic murmur heard faintly after exertion." Who can possibly say the latter is a defect? Certainly not Austin Flint nor William Osler.

Periodic health examinations have incalculable potentialities for good and for evil: which will be realized depends much on the care with which the examinations are conducted and the skill of the examiner; but more depends on the ability of the examiner to distinguish accurately between these:

The abnormal which is certainly pathological;

the abnormal which is most likely pathological;

the abnormal which is most likely not pathological; and

the abnormal which is certainly not pathological.

The Easy Name and the Easy Mark

In the last few days there has come to this desk a sample bottle of tablets labeled "Cacaps." The loosely-attached label is arranged thus:

Tablets	(Caffeine citrate)	Comp
	Acetylsalicylic acid		
	Camphor monobromate		
	Acetphenetidin		
	Potassium citrate		
	(Sodium bicarbonate		

INDICATIONS

La grippe, influenza, muscular rheumatism, common colds, autotoxic pains, migraine, headaches, neuralgia, neuritis, acute tonsillitis, sinus inflammations, toxic fatigue and all conditions resulting from toxemia. Also valuable in dysmenorrhea.

In the "special notice" it is stated that "For the best results in cases of toxic origin CACAPS should be administered for 24 to 48 hours after all symptoms have subsided."

This is a fair illustration of many a mixture of common drugs, put out under a catchy, easily-remembered name and distributed to the doctors in the hope of thus having them introduced to the public, through being prescribed for patients.

The very superficial appearance of frankness in stating the ingredients hardly warrants being called specious, since no dosage of individual drugs is indicated. For aught stated to the contrary there may be thirty grains of acetphenetidin in each tablet; and additional drugs may be included whose first letters would mar the melody of "Cacaps."

The advice to administer a mixture, of which the best that can be said is that it can relieve pain, "for 24 to 48 hours after all symptoms have subsided", is evidently based on the hope of selling more tablets; the good of the patient being recklessly disregarded.

The editor never heard of cacaps before. He has no animus against this product which does not extend to all that horde of nostrums guilty under one or all these counts.

When all of these are thrown promptly into the waste basket and we doctors refuse to get our "treatment" from drug manufacturers, mixers or purveyors that will be a bright day for patients and doctors.

When you see the "easy name," think of how aspirin was introduced as an "ethical" through the gullibility of doctors, then, the entree having been gained, advertised openly to the public: when "easy marks" are being considered, regard yourself (and any one of the others making up ninety per cent of the membership of the profession of medicine, and see if the designation does not fit as snugly as the old-time, calf-skin boot, which would "smother a tick."

"Dear Friend"

Doctor, how many letters, beginning with "Dear Friend" does each week's mail bring you from absolute strangers?" Quite a number, it may safely be hazarded.

They come from promoters of swindling schemes which use precious metals, oil, and real estate as bait for their hooks: they come from unsavory book companies and nostrum concerns, and from fake "learned societies" who are eager to elect you to membership and send you a handsomely engraved certificate,—for a certain cash consideration.

The most recent of these which has attracted attention in this office pur-

ports to come from the "American Endocrine Laboratories." Its signature is undecipherable; but a letter of inquiry addressed to the American Medical Association elicits the information that this concern "appears to be a rather crude piece of quackery with which Herman Rubin and Wm. J. A. Bailey are or have been connected."

It further appears each of these persons has been intimately concerned with a number of fraudulent schemes, some of which have gotten their officials into the penitentiary; and it is not surprising to find some ramifications leading to Bernarr MacFadden's "Physical Culture."

Is it not sufficient ground for grave suspicion that a stranger with something to sell starts in by addressing you as "Dear Friend?"

There is told a tale of an old negro caretaker, being hailed by a white man whom he had never before seen, "Hello, Uncle Ben," responding with, "Who dat know me so much better dan I knows him"? How many of us doctors show as wise an appreciation of analogous situations?

We are caretakers,—of the health of our charges, of our own reputations and of our own dollars laid by for our unproductive years.

When you find one of these "Dear Friend" letters in your mail and you are tempted to put out some money on the strength of it, why not take some

steps to ascertain the identity of your friend? And when a glib-tongued, well-tailored salesman or saleswoman comes in to "give you an opportunity" to buy mining or oil stock, or "to let you in on the ground floor" of a real estate "development" which promises to make back numbers of Palm Beach, Newport and Fifth Avenue, we mildly suggest that you lay the matter before your banker before accepting; and if the salesman tells you that "you must grab this right now because the price is going to be advanced tomorrow," grab him by the collar, instead, and throw him out into the street.

Speaking of the Medical Profession

To be a great doctor is to be a great man, with all the emphasis that can be placed upon the word MAN. He must be deeply interested in Christian education, unmistakable in purpose, dignified, self-controlled, God-reliant, with tremendous ability to carry into perfection right purposes. He must have capacity for work and delight therein. He must scorn fear, favor and defeat. His body and mind must be used with complete unselfishness and for a purpose far beyond the horizon of the average man.

Chalmers M. Van Poole, M.D.
Salisbury, N. C.

CORRESPONDENCE

State Hospital, Dix Hill

Raleigh, N. C., March 22, 1926.

Jas. M. Northington, M.D.,

Charlotte, N. C.

My Dear Doctor:

I write to thank you for that editorial in the February number of your valuable Journal on the cost of Hospitalization.

That is the best advice to doctors I've seen in print; and those of us who did our work prior to the days of hos-

pitals and nurses, are prepared to believe it. Hospitals and nurses—what boon companions they are, and may their shadows never grow less, but when the patient is abused by unnecessarily being burdened by them, they retard rather than hasten progress toward recovery.

I agree with you so heartily—pardon your time I use to tell you so.

Sincerely,

THOS. M. JORDAN, M.D.

DEPARTMENTS

DENTISTRY

W. M. ROBEY, D.D.S., *Editor*

Charlotte

The Patient Has His Say*

Feb. 19, 1926.

Dear Henry:

I hear you have had a lot of teeth pulled and am struggling with a plate. Have my sympathy; but I've been wearing a plate ever since I was fifteen years old. But there are only four teeth on it, and the four teeth fill a cavity where only two teeth were pulled from—the two front upper teeth. But I've a lot of bridge-work in the lower jaws. My plate does not hurt or bother me in any way—never falls down when I laugh, either! I've seen folks fairly spit their plates out when they'd let off a merry yell; but those plates are not made right. I've had that kind; but I declined to accept or pay for them. I've showed the dentists how to make a plate, and they've got to make it that way. It'll stick, don't hurt and I don't know I am wearing it. There was a dentist at Statesville years ago before I left. Carrie and Henry, no doubt, remember him. He was a wild and woolly bird; but what he didn't know about dentistry was not worth knowing. It was he who made a plate for me—a plate that does not hurt, slide, wriggle or move, and no danger of dropping out even when I cough, sneeze or yell. I have his old plate yet; and I ram it under the Richmond dentists' noses and make 'em make a duplicate of it—no satisfaction, no check for it. But at that I've never found a dentist who could even come in hollering distance of the first.

I don't know why you had all them teeth pulled for; but it isn't going to do any good. Whatever was the matter it wasn't the teeth. The other trouble—whatever it is, or was—caused the teeth to hurt or decay. In other

words it was the other trouble caused the teeth to hurt, not the teeth caused the other trouble. My teeth were rotten as far back as I can remember—was always yelling with the toothache; then was wearing a plate at the age of fifteen. Then my hearing went. And the aching teeth and the lost hearing are due to the same underlying cause. They pulled my teeth, damn 'em, but made no effort to find the cause of the constant toothache and tooth decay. I've been trying to find out the underlying cause of the tooth-decay, and the lost hearing; and while I've not worked it out to my satisfaction by any means, still I've worked it out, using myself as a sample, that bad teeth are not the cause of any trouble whatever—it's some other trouble that causes the bad teeth. Pulling teeth to cure the "rheumatiz," neuritis, etc., is all wrong: It's the neuritis, etc., that is hurting the teeth! The doctors and dentists may disagree with me, but from over thirty years' study of my own case, and from asking friends questions about their ways of living, how they felt, etc. I know I'm right. I've seen folks with bad teeth, and folks with good teeth; and I've searched them out with questions; I've seen folks who had had all their teeth pulled, thinking there was something the matter with them; and from all my study of over thirty years of teeth, I give it, not as my opinion, but as **HARD, COLD FACTS**, that bad teeth cause no trouble whatever, **IT'S THE OTHER TROUBLE THAT CAUSES THE BAD TEETH.**

Give my regards and love to all there—with an especial lot to Cousin Bettie. Tell her I'll write before long—have been intending to write from here, but have to come to Charley's office to use his machine till I get back to Richmond.

Please change my paper back to my Richmond address, and oblige. With kind regards, I am,

Sincerely,

*This is a *bona fide* letter.—Dept. Ed.

INTERNAL MEDICINE

PAUL H. RINGER, A.B., M.D., *Editor*

Asheville

Surgery in the Treatment of Pulmonary Tuberculosis

In this country, since 1910, artificial pneumothorax has been one of the recognized methods of treatment in suitably selected cases of pulmonary tuberculosis. Suitable cases, briefly stated, are those wholly unilateral, or those with a great preponderance of involvement in one lung and with a limited amount of inactive involvement of the other lung. Experience has shown, however, that in approximately thirty-three per cent of the so-called suitable cases, the induction of an artificial pneumothorax has been impossible because of the presence of dense, unyielding pleural adhesions.

For about eight years in America, and for many more years in Europe, these cases in which the induction of pneumothorax has proven impossible, have been subjected to a radical surgical operation known as extra-pleural thoracoplasty. Fathered by Brauer, Wilms and Sauerbruch abroad, and by Archibald, Lilienthal, Lambert and Hedbloom in this country, it has become an accredited and a successful means of fighting tuberculosis.

The operation consists in the resection of portions of the ten upper ribs on the affected side, thus allowing the chest wall to collapse and bring about a compression of the affected lung. There is a reduction in chest capacity, an increase of fibrous tissue formation in the lung, a lessening in the size of the thoracic cavity and an immobilization of the affected side resulting in healing.

The operation may be performed under local or general anesthesia and be completed at one time or else divided into stages; the lower four or five ribs being resected at one sitting and the remainder at a second. Sometimes three stages are deemed advisable. The type of anesthesia depends upon two factors: the predilection of the operating surgeon and the temperament of the patient, it being obvious that a long operation under local anesthesia would prove far more trying to a nervous high-strung individual than a briefer operation under general narcosis. No-

vocain is used for local anesthesia and ethylene for general. The periosteum is preserved, the ribs being resected subperiosteally, so that a certain amount of bony regeneration will take place and provide a firm, if not resistant, thoracic wall. It is all-important that a substantial portion of the first rib be removed, as pleural adhesions at the apex are of course of the greatest frequency, and unless the summit of the thoracic dome be resected, satisfactory pulmonary compression is questionable. The resultant deformity contingent upon the sinking in of the thorax on the side of operation, while decidedly marked when the patient is stripped, is usually hardly noticeable when the patient is dressed, so that the cosmetic effect, as far as society in general is concerned, is excellent.

Pulmonary compression in cases subject to thoracoplasty being extra-pleural, the question of adhesions does not present itself and results are in the main satisfactory.

Many surgeons advocate a preliminary phrenicotomy (division of the phrenic nerve) on the side subsequently to be the seat of a thoracoplasty. This trivial operation paralyzes the leaf of the diaphragm on the side upon which it is performed, causing it to rise from 4 to 10 cm. above its fellow, and this aids in diminishing thoracic space and in abetting pulmonary immobilization and compression.

The obvious objection to thoracoplasty is that as a result of the operation the compressed lung is rendered permanently useless. This objection, however, has more of a theoretical than a practical value as any lung subjected to such a procedure will unquestionably be already so damaged as to be of no real use to its possessor, and its elimination as a functioning organ will be an asset rather than a liability, as the poison manufacture and absorption destroyed by its compression will be of far greater benefit than the retention of the lung as a respiratory factor.

Results of extra-pleural thoracoplasty are thus given by Alexander:

Out of 1159 cases operated upon	
36.8 per cent were cured	
24.4 per cent were improved	
38.75 per cent became worsened or died.	

When it is considered that all these

cases were in individuals upon whom artificial pneumothorax had been tried and had failed, when it is recalled that such cases by and large are far advanced in their disease and, if left to the ordinary hygienic-dietetic regimen for tuberculosis, offer a uniformly poor prognosis, and when it is evident that these 1159 cases represent the growth of extra-pleural thoracoplasty from its very infancy to its present status, it must be admitted that a powerful factor for good has been introduced into the treatment of advanced cases of pulmonary tuberculosis.

SURGERY

A. E. BAKER, SR., M.D., *Editor*
Charleston

Goiter

Our knowledge of the thyroid gland has made wonderful strides in the last three years, especially in the simplicity of classification, the behavior and significance of each type, and the treatment specially indicated relative to each type of goiter.

Plummer claims that there are only three definite types of goiter,—colloid, adenomatous, and exophthalmic, and that all the other types are either variations or combinations of these three. A simple classification like this does much toward eliminating confusion.

Colloid goiter occurs most frequently between the ages of fifteen and twenty-five, being rarely seen in persons more than thirty. Clinically, it is recognized by the symmetrical enlargement of both lobes, soft and not nodular on palpation. It seldom produces symptoms except slight nervousness or worry over the knowledge of the fact that it exists.

This is the only type of goiter that is not surgical. It disappears under the administration of iodine or thyroxine.

Adenomatous goiter may be recognized by the irregular nodular growth. It seldom gives symptoms until about fifteen years after its appearance, then toxic symptoms, a hyperthyroidism develops, why, we do not know. The onset of symptoms is so mild and insidious that the patient often does not realize the extent of his illness and does not seek surgical relief until after or-

ganic degeneration develops, when the operative risk is high.

In exophthalmic goiter, the onset of symptoms is rapid and progressive, the nervous system more profoundly affected; in the former the cardiovascular system suffers most. What is known as the "goiter heart" develops. This explains why the mortality is greater in the toxic adenomatous goiter.

Therefore, we find that hyperthyroidism associated with adenomas produces different clinical symptoms from that of exophthalmic goiter. The two conditions are often confused, but in the last few years it has been shown definitely wherein they differ.

The preoperative treatment of the toxic adenomas also differ greatly from that of the exophthalmic goiter, which consists chiefly of rest and symptomatic treatment, plus x-ray application to inhibit gland activity. The extent of organic changes that may have taken place will determine results of treatment.

Whereas ligation is chosen for the more serious type of exophthalmic goiter, it is of no benefit in cases of adenomatous goiter with hyperthyroidism, also the Lugol solution of iodine is contraindicated in the treatment of the adenomatous goiter, for it has been demonstrated that the administration of iodine often converts this goiter into one of hyperthyroidism.

The quiescent adenomatous goiter, though of many years standing, should not be considered harmless, in that a large per cent of these develop into a state of hyperthyroidism; therefore every patient with a simple nodular goiter should be advised to have it removed.

The first convincing report of the benefits of iodine in exophthalmic goiter was made in 1923. It showed the great value of iodine in reducing the basal metabolic rate, also in bringing such patients almost immediately out of the cerebral or gastro-intestinal crisis, and in lowering both the medical and surgical mortality rate.

Boothby states that "the most striking and definite effects are obtained in the most severe cases. In twenty-four hours the patient is brought out of the moribund condition, which is associated with the persistent vomiting of the

gastro-intestinal crisis of exophthalmic goiter. The effect is as startling and gratifying and fully as certain as that of insulin in cases of diabetic coma."

In mild cases the dose of Lugol's solution is ten minims once or twice a day; the average dose is ten minims three times a day; for patients in a crisis give from sixty to one hundred minims daily until the crisis has subsided, then give the average dose as stated above.

The clinical effect of administering iodine to patients with exophthalmic goiter who are being prepared for operation has been very marked. The nervous tension and stare soon disappear and there is great improvement in appetite and ability to sleep. In about a week the pulse and basal metabolic rate drop, and within a short time the patient gains in strength. This marked improvement is not equal in all patients. Experience has taught us that the more toxic the patient showing grave symptoms, the more gratifying is the improvement. In the milder cases the benefit is less apparent, and if of long standing, often very little improvement is noted by the administration of iodine.

In advanced toxic cases Boothby states that "after the marked initial improvement due to iodine, the condition of the patient becomes relatively stable and no further improvement occurs." Repeated observations on the effect of iodine given continuously for a year or longer have confirmed this conclusion, so there is no hope of curing an exophthalmic goiter by the iodine treatment.

Patients should be thoroughly impressed that iodine is not a method of cure in exophthalmic goiter but a method of preparing patients for operation. The iodine must be continued during the post-operative period in small doses and when properly given will prevent death from acute post-operative exophthalmic goiter crisis. We should also urge strongly that iodine should not be given in cases of adenomatous goiter in that it may induce hyperthyroidism.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*

Charlotte

Fracture of Both Bones of the Forearm

Sometime ago a very instructive article was written reviewing the end-results in fractures of the femur treated at the Johns Hopkins Hospital. The review covered a long period of years. The conclusion was that best results were obtained in those cases where the limb was immediately put up in a plaster of Paris spica. We are sure that traction was applied to the limb, with the patient anesthetized, certainly in the majority of cases, and the cast applied from rib margins to toes. The foot should always be incorporated in a spica of the hip where the alignment of the femur is at stake.

It is timely to have an authority like the Hopkins come out and demonstrate that the old method used in general practice of putting limbs up in spica casts, after all, gives the highest average best end-results. Nothing will make them all perfect, and some will give trouble under any conditions. The variety of mechanical splints, somewhat popularized during the war, have brought grief in the hands of some workers, not thoroughly familiar with the province and limitations of these instruments.

In the January issue of *Surgery, Gynecology and Obstetrics* this year, another article appears from the Hopkins, by Dr. Cecil H. Bagley, dealing with the management of fractures of both bones of the forearm. This article makes as practical disposition of this type of injury as the former article did of the femur fracture. Two hundred cases are reviewed.

It is observed that good clinical end-results can be gotten without complete anatomical reposition of both bones. A good "rule-of-thumb" measure to follow is, in the upper half of the forearm reduce the ulna and somewhat ignore the radius, and in the lower half of the forearm reduce the radius and somewhat ignore the ulna. The ulna links the forearm to the elbow and the radius links the forearm to the wrist.

In arriving at these reductions, the closed method should be accomplished if possible, but an open reduction can be done in a very simple way, and should be done, if necessary, to line up

the ulna in a break above the middle of the forearm, or the radius in a break in the lower half. A good functional end-result is to be sought and obtained in the simplest, most economical way.

In the 200 cases reviewed, 110 were under ten years of age, 66 from eleven to fifteen years, and only 24 over fifteen years of age. Epiphyseal separation rarely occurred. The location of fracture was 16 in the upper third, 79 in the middle third, and 106 in the lower third. In variety, 94 were complete breaks, 96 greenstick, and 10 were compound. The reduction was accomplished, by closed method 190, and open method 10. The results were satisfactory in 194 cases and unsatisfactory in 6 cases.

In fractures of the forearm, as elsewhere, the necessity for prompt reduction is obvious. In all reductions of the forearm three aims should be kept in mind: (1) as rapid firm bony union as possible; (2) as complete anatomical correction of fragments as possible; (3) as early active and passive motion as possible. It is not always advisable to subject the patient to repeated reductions in order to obtain a perfect position of the fragments, because an extremity which has been immobilized for a great length of time or which has been subjected to repeated manipulations is likely to have impaired function for a considerable length of time afterward. One might infer from this that good function is better than a condition which the x-ray plate shows as anatomically perfect.

In children a good result may be expected even when a perfect reduction has not been obtained, since there is much subsequent improvement as the bone growth proceeds. In adults there is a very little tendency to overcome deformity following imperfect reduction. Before bony growth is complete a closed reduction is preferable to an open one, even though perfect alignment of the fragments cannot be obtained.

RADIOLOGY

JOHN D. McRAE, M.D., *Editor*
Asheville

X-Ray Treatment of Hyperthyroidism

This is a condition in which the thyroid gland is overactive. It may secrete its juices in excessive quantity because of some intracellular disturbance; then there is no enlargement of the gland. On the other hand there may be a multiplication of normal thyroid cells with consequent oversecretion and hypertrophy.

The causes of hyperthyroidism are indefinite. It occurs more often in women and in most instances is preceded by some severe emotional shock, worry or focal infection, or follows a severe illness. The onset may be gradual or severe. The disease is commonest in young adults but is seen in the extremes of life.

Hyperthyroidism is a toxic disease and is recognized by a group of symptoms which are: rapid and irritable heart action, tremors, nervousness, hypertrophy of thyroid gland, exophthalmos, diarrhea and excessive sweating. The first of the group are commonest. When these are present a basal metabolism test being made will show an increased metabolic rate 20 per cent or more.

The disease is diagnosed with a fair degree of accuracy without the use of basal metabolism tests. It is useful to determine the rate of metabolism before beginning treatment and during the progress of treatment to check results.

Surgeons have been slow to recognize the value of treatment with x-rays or radium, but they are gradually giving more importance to the method, as is evidenced by the increased number of cases being referred for radiation treatments. The percentage of cures claimed by radiologists and surgeons is about the same. It is said that increased vascularity and adhesions are produced by x-ray and radium treatments and that in their presence surgery becomes more difficult.

Adhesions and increased blood supply do not result from the doses of radium or x-rays which are used by experienced radiologists. The presence of thyroiditis is apt to be accompanied by these complications whether x-rays have

been used or not, and no doubt they have been credited to radiation treatments when these treatments were not responsible. These cases, and those where technic was at fault, have probably been responsible for the surgeon's skeptical attitude.

X-ray treatments fail in some cases, and surgery is then applied with success, but the reverse is also true. It is probable that on either hand there is faulty technic or that the unfortunate cases which do not recover would prove failures under any method of treatment.

Surgery is a radical procedure, attended by hospitalization and some degree of shock, while radiation is conservative and its results can be better controlled. It is not accompanied by shock; therefore it is the method of choice to treat with x-rays. The two methods are to be used as supplementary to each other. Rest and such medicine as is indicated must be a part of the treatment in all cases. Especially is surgery to be used in cases of glandular enlargement where pressure symptoms are distressing and immediate relief is demanded. When it is decided to operate on very toxic cases the patient may be helped and the surgical risk reduced by applying preliminary x-ray treatment.

In those cases where great glandular enlargement and exophthalmos are present it is to be expected that the exophthalmos will be relieved in part and sometimes altogether; but the gland will still be somewhat enlarged when constitutional symptoms have disappeared. Incidentally the tumor is made smaller in most cases.

X-ray treatments are applied by most radiologists at three or four weeks intervals. Benefit is frequently obtained immediately, though it may not be marked until three or four doses are given. The radiations are mild and should never produce skin irritation. The average case is treated seven times. Approximately 75 per cent of cases are treated with success. Of the remaining cases a considerable number are benefited.

EAR, EYE, NOSE AND THROAT

C. N. PEELER, M.D., *Editor*
Charlotte

The Thymus in Children of the Tonsil and Adenoid Age

A thymic death is one of the supreme tragedies of surgery. An apparently healthy child dies during the administration of an anesthetic, during or after a tonsil-adenoid operation, or during a simple circumcision. Again a child was standing on the sidewalk, a runaway horse dashed by and the child dropped dead. An autopsy showed that the condition of status lymphaticus was present; i. e., there was an enlarged thymus and a hypertrophy of all the lymphoid structures of the alimentary canal. These structures are the solitary follicles—Peyer's patches and the mesenteric glands. This was all the pathology found to explain such an unexpected death.

Following a thymic death, it has been the routine in the throat department of the Massachusetts General Hospital and the Massachusetts Eye and Ear Infirmary to x-ray the chests of all children from one to sixteen years of age who are to have a tonsil and adenoid operation. During the first year two thousand three hundred and forty-four children were rayed: of this number one hundred and eighty-five showed a positive thymus shadow. One hundred and ten of these were treated and successfully operated upon. Before operation these children were given four x-ray treatments of a third of an erythema dose. The treatments were given ten days apart. Ninety per cent of the children treated showed a decided improvement. Up to the present the total number of children, 4,825, from two to sixteen years of age, 340, or about seven per cent, showed enlarged thymus. These children were given x-ray treatments as mentioned above and all patients were operated upon safely.

Enlarged thymus may be differentiated from enlarged tuberculous gland. A series of ninety x-rays taken at the Peabody Home—tubercular sanatorium—showed a broad mediastinal shadow in seven per cent. The crying of a child during the taking of an x-ray plate does not enlarge the thymus.

Blood counts made on children who have enlarged thymus gave a slight lymphocytosis. After x-ray therapy of the thymus there was no change in the blood count.

The thymus is a lymphatic gland; it has not been proven that the thymus has a specific function.

A thymic death is much like a death from acidosis. The generalized enlargement of the lymphoid structures of the alimentary canal is the protective response to a recurring invasion by toxins.

The tonsil-adenoid operation is the most common one in children; therefore, it seems a wise precaution, owing to our lack of knowledge of this condition which can express itself so tragically, to learn the size of the thymus and, if it is enlarged, to reduce it to normal size by x-ray before undertaking operation.

In a review of articles on the physiology of the thymus based mainly on animal experimentation, from 1904 to 1924, C. L. Short, of the Harvard Medical School, stated his conclusions as follows:

1. The thymus is not necessary for life.
2. Thymectomy has no effect on the growth and development of the skeleton and organs.
3. Castration delays the involution of the thymus.
4. A substance contained in the thymus when injected causes convulsions.
5. Thymus feeding to salamander larvae with parathyroids causes tetany.
6. Thymic hyperplasia follows double suprarenalectomy.
7. Thymic hyperplasia in thyro-toxicosis is secondary.
8. In birds a relationship exists between the thymus and the egg-producing mechanism.
9. So-called "thymic death" not due to tracheostenosis, probably bears no relation to the state of the thymus gland.
10. One, if not the primary function of the thymus gland, is to produce leucocytes.
11. The thymus may also have an anti-toxic function. (Hammar).

Partial abstract—Article Laryngoscope, January, 1926.

Mosher. MacMillan. Motley.

DERMATOLOGY

JOSEPH A. ELLIOTT, M.D., *Editor*
Charlotte

Bismuth in the Treatment of Syphilis

In 1919 Sazerac and Levaditi published their researches on the anti-syphilitic effect of bismuth compounds. Physicians were impressed with the therapeutic possibilities of bismuth and gave various preparations a clinical trial. At the same time much experimental work was being done to prove the efficacy of these preparations. As a result of the experimental work and the clinical experience with numerous bismuth salts, many clinicians believe that bismuth should occupy a prominent place in our therapeutic armamentarium. Milan, comparing bismuth with arsphenamin and mercury, gives arsphenamin a therapeutic index of 10, bismuth 7 and mercury 4. He believes bismuth to be considerably more potent than mercury and about half way between mercury and arsphenamin. While it is too early to make definite statements as to its therapeutic value, many writers are greatly impressed with the results thus far obtained. Some clinicians have been so impressed with the therapeutic value of this drug that they have substituted it for mercury in the routine treatment of syphilis.

There are numerous bismuth preparations on the market, many of which no doubt are valuable. I have used a number of these preparations, but have given only a few treatments with most of them. I have, however, used bismuth potassium tartrate for the past three years and during this time have given approximately 3,000 injections of this drug as an adjunct to neo-arsphenamin therapy. The results thus far have been superior to those obtained with an equal amount of mercury. It has been my practice to give conservative doses, from .1 gm. to .2 gms. a week, and I have not had any serious reactions. Mild cases of stomatitis have occasionally been observed with the larger dosage. The stomatitis was characterized by slightly sore gums with the blue line at the edges of the gums, which is indistinguishable from a lead line. It has readily disappeared with the cessation of treatments, and thus far I have not seen a case of ulcerated stomatitis.

I believe that bismuth should be given a thorough trial as an antisymphilitic drug, and should be tried particularly in patients who show an intolerance for either mercury or arsphenamin, and in cases where arsphenamin is contraindicated.

GYNECOLOGY AND OBSTETRICS

ROBT. E. SEIBELS, M.D., *Editor*
Columbia

Operative Sterilization

It is customary for a physician to advise a woman not to become pregnant again when he has brought her through a pregnancy complicated by eclampsia, pulmonary tuberculosis, severe cardiac disease or diabetes; perhaps, even under other conditions. The conscientious practitioner may go further and have a serious talk with the husband, ending by advising the use of certain douches or of the rubber sheath. Then, perhaps paraphrasing the words of Pontius Pilate, he washes his hands of the matter and says when called in a little later to deal with another pregnancy: "Didn't I tell you people not to let this happen again?"

When a woman under our care develops a serious and permanent injury to her vital organs during the child-bearing years, why do we not face the facts as they are and realize that pregnancy, like the sword of Damocles, hangs ever over her head? To advise no further pregnancies is in many cases but to save our own consciences, more or less adequately, for we know that there is no safe contraceptive. What then remains? Operative resection of portions of the tubes with burying of the uterine ends under the peritoneum; anesthetic local; danger much less than that attendant upon an induced abortion or of another pregnancy!

This probably sounds like the rankest sort of heresy at first, but let us see. Given such a patient with enlarged and infected tonsils—do we hesitate to recommend their removal? The appendix and the gall bladder have been removed for much less weighty reasons. Even the poor lacerated cervix which has probably never given rise to systemic manifestations from infection has received the assaults of the industrious

cleaner up of foci of infection. Yet, we well know that none of the foci of infection play nearly so important a part in the terminal histories of nephritis, decompensated cardiac disease, diabetes, and tuberculosis—pulmonary and urological—as does an added pregnancy.

Let this be held to be no brief for the gynecologist who would confer sterility upon the woman who wishes no more children because her first labor was hard, or whose husband wants only two, or whose husband is nervous. In such cases where the social element is the strong one and the husband is the main or conscientious objector, ligation of the vas deferens can be done under local anesthesia and is the operation of choice, though the opportunity to perform it is but seldom offered. But, to the female cripple, sterilization is a boon and can be safely offered.

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

Changing Ideas About Feeble-mindedness

Increasing knowledge of child-life is bringing more sharply into focus the multitudinous problems associated with feeble-mindedness. There is keener and keener inquiry as to what feeble-mindedness is, how prevalent it is, how it manifests itself, what its causes are, and what it is to be done about it or for it. Just as the problems of so-called insanity revolve about the mentality of the individual and manifest themselves through deviations of behavior aside from the normal, even so the manifestations of feeble-mindedness have to do with conduct. But insanity, so-called (a legal, and not a medical term, properly speaking), relates to the individual's departure from his normal behavior. The behavior of the insane person has once been normal, but sustained departure from that normal constitutes insanity. Insanity arises generally after adulthood has been reached. Feeble-mindedness implies lack of full mental development. In this condition mental adulthood is never reached. Mental childhood lingers on into full-grown physical manhood or womanhood. Rather sudden or marked deviations

from normal conduct are much more easily observed and more easily measured in grown people than are the failures of proper mental growth in children. And just as we have had difficulty in enabling the public to understand that insanity does not necessarily imply loss of mind, in like manner difficulty is experienced by the public in learning that feeble-mindedness is not obliged to mean absence of all mentality. In mental disorders grouped as the insanities the disorder of conduct and the disturbance of reasoning may be so slight as to make the diagnosis difficult. In medico-legal work in the court-room this state of affairs is often found. In like manner the failure of mental development in the feeble-minded may be so near to the normal level as to make the degree of defectiveness difficult of detection. Yet this very slight degree of subnormality, though unrecognized, may account for failure in adult life, and for unaccountable stupidity or incorrigibility in childhood. Our deepening knowledge of the workings of the mind enables us to believe that the sound mind gives birth to wholesome behavior and that out of an unsound mind springs unwholesome conduct.

The wide-spreadness of mental subnormality is gaining intelligent recognition. Many agencies have helped in making this possible. At no remote time all school children of like age were supposed to have equal learning power. The alert were held back in progress by the dullards in the classes, many switches were cruelly and uselessly worn out in efforts to lift those of lower mental development up into the normal plane. And teachers, because they were dealing with children they could not understand, wasted their time, their energy, and their patience in trying to do the impossible. Many agencies have been set to work in efforts to discover early mental defectiveness. Doctors are being prepared in the medical schools to expect to encounter such children in the daily rounds of their practice; teachers are being trained in child psychology; mothers and fathers are instructed in children's clinics, and courts are coming to recognize in truan- cies and impossible behaviors the outcroppings of defectiveness of juvenile minds, whether in the adult or in the child.

The danger at present would seem to be not so much that the condition might fail of recognition but that all the feeble-minded might be grouped together. That would constitute an enormous blunder. The individual lack may lie in one person not so much in inability to learn, as in inherent incapacity to make utilizable in daily life what has been acquired. In another individual, young or old, the defectiveness may exhibit itself in the moral domain—in persistent failure to live normally and decently and wholesomely—simply because of the absence of the directing moral quality. In still another defective, who may seem superficially to be normal, the lack of soundness of mind may serve as the fountain of origin of behavior that is constantly lawless,—check-flashing, or fighting, or bigamy, or forgery, or plain stealing. But it is probably true that the largest army of mental defects are those about whom the great world hears nothing at all. They exist. They live and move and have their being, uncomplaining, without hope, without aspirations, relatively unrewarded, silently, mirthlessly; they do the heavy, necessary, muscular drudgery upon which the sustenance and the comfort of mankind depend. The larger group constitutes the solid substratum upon which civilization is built. Economically they are comparable to the slaves of Rome in her proud period and to the African slave of the South in the century immediately preceding the Civil War. It may be that this great inert, unthinking mass makes civilization stable and secure. They constitute a firm anchorage.

In the domain of feeble-mindedness the pressing necessity is to think in terms of the individual and not of the group. There must be recognition of the fact that one feeble-minded person may be a relatively good citizen, another may be a criminal, who must be kept forever housed and confined. We must inform ourselves about the differences in defectives; one subnormal child may be able to learn a trade, but unable to master a profession. It should mean little to say that an individual is merely feeble-minded. In the way of individual success and helpfulness to mankind it certainly means nothing to say that a person is mentally normal. Knowledge of the particular way in which the fee-

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ble-minded person's lack manifests itself is what the world stands in need of. Is the defectiveness in the boy such as to make him unfit to be a poultryman? Will his subnormality lead him into a criminal life? Will he be a menace in the home or in the community? Such questions as those must lead to individual investigation. Merely placing a child or an adult in the group of the feeble-minded can do no good. It may do the individual harm.

Additional information is needed about the causes of mental subnormality. Are we going to continue to believe that the condition is always the manifestation of self-perpetuation? If the proximate parentage is sound in mind and in morals and of wholesome behavior are we to infer that the feeble-minded child of such offspring is an unsound outcropping of mental enfeeblement in some more remote ancestor? Does individual mental subnormality always have its origin before the birth of the individual? May not a normal child become so injured during birth as to be retarded in mental development? May not injury or disease or disaster after birth fall upon a normal child with such violence or such weight as to retard development of the mind? Many injuries at birth and many infections and hurts in the early days of infancy must entirely escape observation. But even if the brain be badly damaged why should such injury make itself felt at all by the reproductive cells? And if these cells be normal why should not a feeble-minded person whose defectiveness was not inherited beget normal children?

The whole problem of feeble-mindedness is in need of more careful study. If it is to be understood more information must be made available about its causes. Heredity as a factor in it can not be intelligible without more definite knowledge about causative factors. If the condition be an acquired characteristic there is less possibility of its transmissibility, for the reason that such characteristics are not likely of transmission.

The final problem is to know what to do with the person exhibiting defective mental development. The one thing not to do is to regard such person as necessarily hopeless and helpless. The insistent thing to do is to make an effort to find out what the degree of lack of

development is; how the defect disorders the individual's conduct; then find or create an environment in which neither will be hurt by the presence of the other. The present age is a busy age. Mere living is difficult and expensive. Every one who is able should be productive. Constant effort should be made with the mental defective to train his mental residuum and to make it go as far as possible in support of himself.

UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*

Charlotte

The Diagnosis of Subacute and Chronic Gonorrhea

Gonorrhea is truly a social menace of great import both to the doctor and laity; it affects the individual, the family and the community; its diagnosis, careful study and treatment deserve to rank with the most serious of diseases. So frequent is this disease, that cases of urethritis present themselves daily to the general practitioner for diagnosis, advice and treatment.

Unfortunately many doctors regard a chronic urethritis or "gleet" of slight significance or of minor importance. They either are ignorant of the possibility of the presence of the gonococcus or they want to satisfy the ever anxious patient, who is afflicted with a chronic urethral discharge. Sad to relate, the patient often seems to sense his precarious state, while the doctor remains ignorant. Some of the disastrous sequelae of a subacute or chronic urethritis are strictures of the urethra, double epididymo-orchitis leading to probable sterility, seminal vesiculitis and prostatitis, prostatic abscess and retention of urine. Seventy (70%) per cent of cases of Bartholinitis, urethritis, cystitis, endometritis and salpingitis seen in married women are due to infection by ignorant, careless or unscrupulous husbands who have a subacute or chronic urethritis diagnosed by their confidant and medical adviser as a harmless "gleet."

A male patient presents himself for examination and a diagnosis. He has a pearlsh-grey urethral discharge that fills up the urethra, but does not "flow"; if questioned, he says he has a "morning

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drop" sometimes yellow in color and if he takes any alcoholic drink, exerts himself physically, or has undue sexual excitement he develops a frank urethral discharge just for a day or two. If examined carefully his underclothing will be stained at times and his urine (first glass) usually will show filaments (shreds). The possible diagnoses in such a case are:

- (1) Subacute or chronic gonorrhea.
- (2) Urethritis due to the common micro-organisms—(a) primary urethritis, (b) secondary urethritis.
- (3) Chemical urethritis.
- (4) So-called "aseptic" urethritis.
- (5) Urethritis due to a special diathesis.
- (6) A toxic urethritis.
- (7) Traumatic urethritis.
- (8) Certain cases of tuberculosis produce a purulent urethritis.
- (9) Urethritis due to intra-urethral chancre.

The essential points to consider in a careful study before a diagnosis is made are as follows:

(a) All urethral discharges are not gonorrhea, but repeated systematic attempts should always be made to demonstrate the gonococcus.

(b) In subacute and chronic urethral discharges, especially in the female, the smear with Gram's stain is not sufficient in many cases to arrive at a correct diagnosis. (Keys, E. L., Jr., J. A. M. A., Vol. 75, No. 20, p. 1325.)

(c) Provocative tests (injection of silver nitrate 1-1000 sol.) The reaction following the passage of a sound or the alcoholic (Beer) test can always be easily carried out and careful cultural studies made following these.

(d) The culture should take precedence over all other evidence as to the presence of absence of the gonococcus. After four years of continued and almost routine use, in subacute and chronic cases, as a diagnostic aid, we believe the Swartz culture method, reliable, accurate and simple. (Swartz, E. O., J. of Urology, Vol. 4, No. IV, p. 325.)

I make no apologies for these elementary remarks. All of us should review the fundamental principles of making a correct diagnosis in suspicious urethral infections. Surely nothing can be more important.

PEDIATRICS

FRANK HOWARD RICHARDSON, M.D., *Editor*
Brooklyn, N. Y. and Black Mountain, N. C.

What Sort of Education is YOUR Child Getting?

It would be hard to find a thoughtful student of the conditions of the day, who would care to deny that education is the greatest problem that we have. Even those who might at first thought give prohibition, the movies, present-day morality, or religion a prior place, cannot doubt that the education of the people in the right attitude to take toward prohibition, the proper standards to erect for the movies, the correct conceptions to hold regarding their own morality, and the truest and highest type of religion to arrive at, is the task of the hour. To whom shall we confide the many-sided task of education? Who or what are the agencies so capable and so conscientious that we can entrust to them this most important of all the tasks confronting our democracy today?

A generation ago, the answer was easy,—though whether the easy answer was the correct one, we may have to consider in a moment. Education for the American boy or girl was a more or less standardized affair, which most of us took for granted as the best thing of the kind obtainable, and far superior to anything so far evolved by the genius of any other people or race. We admitted without argument that the little red school house, or its city equivalent, was without any doubt the finest thing in the way of education for American youth that had been, could be, or for the matter of that need be, evolved! No other country had anything like as perfect a system as this of ours; it had made the nation a nation of literates, far beyond any other of the great nations of the world; and it was turning out a type of educated graduates who were eminently fitted by virtue of its finished work to carry on the great traditions of the fathers in government, education, and religion!

So far, so good. And then along came these busybodies, the newer psychologists and educators, with their norms, their standards, their tests; and lo and behold, our lovely dream of a perfect democratic education available to all, and benefitting all, was rudely shatter-

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ed, and we began to be told things that were an outrage and a scandal to the ears of loyal patriotic Americans. We found that much of the education that we had been so loudly praising was virtually a waste of time; that much of the real education attained by our boys and girls was coming to them in spite of, rather than because of, what the schools were doing for them; and that education for life really began after graduation from our costly educational system, in a vast number of instances. We began to realize that the children that we were sending to school with good sight, were returning to us with eye-strain; that straight backs were being made crooked; that fearless little minds were being imbued with a numbing, ramping fear of the teacher,—a far different thing from that “fear of the Lord” that we are assured is “the beginning of wisdom!” Parents began to go to school to see what was going on; and those who did more than go through a perfunctory form of “meeting the teacher,” began to get a new and rather disturbing conception of what this “education” that they had been taking so smugly for granted, might be doing to their children. A mother who came home with a splitting headache after sitting for an hour or two one morning in the classroom that her daughter and her daughter’s teacher had to stand for five hours, five days a week, began to be troubled by a disturbing suggestion that perhaps “school strain” might be more than a mere catch phrase. A father who fled from the school room through sheer boredom after half an hour of sitting through some exercise of history or geography, and who never thereafter could summon up courage enough to subject himself to a repetition of the ordeal, began to consider—albeit most reluctantly,—that perhaps there might be some slight excuse for his son who had failed to evince the absorbing passion for the acquisition of knowledge that we fathers like to think marked our own adolescent years, and yet that we well know did not characterize our dalliance along the path of learning. Sons and daughters graduating from high school and college, and then finding themselves without any real desire or leaning toward any sort of career in business or profession at an age when their “less

fortunate” boyhood and girlhood friends were well started in their life work, made fathers and mothers realize, often too late, that the stereotyped education might not be all that it had been cracked up to be! Last of all came the disclosures of the Great War, with its educational and psychological tests of the young men of the land; and we woke up with a start to find that the little red school house and the big brick school building, notwithstanding our sweeping approval of them and their work, had not succeeded even in turning out a nation of literates!

What to do! That was, and is, and has been for a longer time than is generally recognized, the state of mind of a very intelligent, though discouragingly small, percentage of our thinking population. Way back in 1897, when John Dewey wrote his “School and Society,” the feeling of dissatisfaction with education as it was commonly conceived of, was sufficiently widespread to gain for that epoch-making little book a very wide and well-informed reading public. The New York Ethical Culture School, founded even further back, was an expression of distinct dissatisfaction with everyday education. It is an interesting fact that modern education,—or the newer conception of education and what it should be,—is just about as old, or as young, as the automobile. The discouraging thing about this thought, however, is that whereas no self-respecting man thinks of providing for his family a car of a type that would have been considered quite smart and up-to-date fifteen, or even ten, years ago, many a supposedly wide-awake man today is perfectly satisfied to give his son or his daughter an education whose model was definitely passe twice that number of years ago! “Oh, the public school (or Miss Somebody’s School, or the old Such and Such Academy, as the case may be) was good enough for me; and I guess it is good enough for my boy!” Is the type of illumination that they used then good enough for your son? Is the kind of transportation good enough? Is education to stand still, while every other phase of life gallops ahead of it in this twentieth century of progress? What are we going to do about it,—be satisfied with obsolete forms, or get something modern in the way of education?

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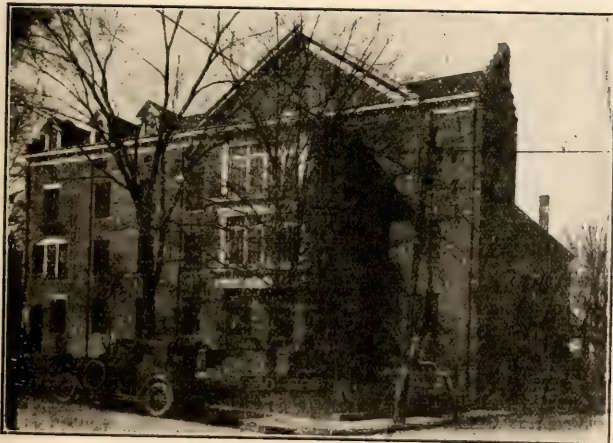
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To give even the sketchiest sort of a purview of what the newer educational ideals are, would be far too much of a task for a whole book, much less for this short discussion. John and Evelyn Dewey have attempted it in their suggestive and stimulating little volume, "Schools of Tomorrow," in which they give brief sketches of a dozen experimental schools in as many parts of the country, which are attempting in almost as many different ways to work out some solution of the problem of what modern education should be and do. We may not here even glance with them at these fascinating little laboratories of real life; but we may simply state some of the objectives that modern educators are setting up, and then compare them with the objectives that seemed to govern the education of our own day; or that we can discern as governing the education that is being ladled out to our own boys and girls, so far as we can discern any objectives at all! "Learning by doing;" training the five physical senses before attempting to train the intellectual faculties; correlating educational tasks with real life; putting actual interest into school tasks, and not imposing them merely as disagreeable things to be gotten through with because they are "good for us;" making school so attractive that "being kept in" would be a reward, not a punishment; learning arithmetic, ethics, book-keeping, and manners by actually running a store in the school-house; children actually changing the diet of their own homes, because of the appeal and practicality of the teaching at school; these are a few of the things that the newer education concerns itself with. Is your child getting any of these things; and are you satisfied that he is not? If you are satisfied, are you a good parent? And if you do not know whether he is or not, and whether he ought to be or not, are you a well-informed parent? If you are not a well-informed parent, can you be a good parent?

This chapter on education will be a disappointment to those parents who have been expecting to find in it a cut-and-dried solution to their problem. It has been written with this thought definitely in mind,—that there is no such thing as a cut-and-dried solution to the problem. What then can a parent do?

First and foremost, if he is a parent in any way worthy of the name, he must be willing to visit his child's school, not once, but several times, each term. He must do this, not merely as a hasty visitor, but as a leisurely observer, with time and willingness to see what sort of educational pabulum is being fed to his child. It is no fair or reasonable answer to this demand, to say that a business man has no time during the day to do things of this sort. The business man who cannot arrange upon occasion to do just this sort of thing, may find upon a later occasion that he has to arrange to take time off for certain very unpleasant occurrences that might have been prevented had he made the effort to accomplish this comparatively simple task. During his inspection of the school and of the classroom and of the teacher he must, if he desires to gain the most out of his time and effort, assume a mental attitude that has been urged upon him in other times and places than here. This attitude is one summed up briefly and succinctly in the Golden Rule; and in order to assume it most successfully and gainfully, he must constantly mentally arrange cognate situations in which he places himself in positions similar to those in which his child is being put, in order to judge adequately of the effect of these situations in which he sees his child placed. For instance, if he finds that his own mind wanders hopelessly during a teacher's "explanation" of a difficult point, and that he is more muddled at the end of the talk than he was to start with, he needs no great mental gymnastics to realize that his son is probably equally muddled; and that unless some other explanation is made, he will not only fail to get this point clearly, but may lose interest in the whole subject. It may, however, require the building of a mental picture of himself associating with his peers, and being subjected to a very painfully embarrassing snub, before he can properly evaluate the feelings of his son, whose perfectly proper question meets with a sneering or derisive reception at the hands of the teacher, plus a patronizing laugh from the rest of the pupils, ever alert to curry favor by siding with the teacher against one of their own number. It will not do for him to excuse his lack of interest,—yes, his posi-

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tive boredom,—on the ground that the subject under consideration is too elementary to hold his more mature mind! It is a well-known fact that the public speaker who can gain and hold the attention of the most limited and immature of his audience, will command the close attention of the most erudite; whereas he who tries to hold the most mature of his auditors, will probably fail not only to capture the rest, but even to attract the one he aims at.

And what if the parent finds that the school, as he evaluates it, is deficient in much or in all that a school should be; what can he do? At least, he is in a position, — not comfortable, perhaps, but certainly far more salutary,—to cease deluding himself into the belief that because his child is attending "a" school, he is thereby being educated. He can begin to look about him in the community, to find where better schooling is to be obtained; and if the procuring of such better educational facilities involves dispensing with a much-beloved motor or a highly-prized style of living, he can at least look matters in the face and decide them with his head, and his backbone, and not with his wish-bone exclusively!

Still another course is open to him. If he has not lost all of the reforming, Puritan zeal and backbone that was once part of the heritage of the American, he may determine that the school which is being run by his tax contributions for his children, shall show some attempt to keep itself up with the march of progress, just as his streets must be paved with twentieth century paving, his city lighted with twentieth century illumination, and his residence and office supplied with twentieth century sanitary drinking water. An agency already exists for accomplishing this object, a weapon or tool already wrought to his hand, in the Parent-Teacher Association, without which no self-respecting educator today thinks of conducting his school. It is a fact not generally realized by the laity, but one keenly felt and frankly acknowledged by the school-men and school-women, that the parent can accomplish just about as much as he desires, if he will take the trouble, and make the necessary effort. The school inspector or the principal may order; but only the vigorous and determined parent can ac-

complish, which is quite a different thing!

Just one illustration of this. In the course of my work with children, I have found that, for reasons that we need not go into here at length, the average child under ten or eleven actually does far better, mentally and educationally as well as physically, on a three-hour school day than he does on the more usual five-hour day. The private schools generally have recognized this; and have instituted the shorter day for their younger children; but the public schools, and a discouragingly large number of the less advanced among the private schools, still lag behind with the five-hour day for these little tots. While I have never yet attempted to change the practice of any one school in this particular, I think it is no exaggeration to say that I have had my secretary write notes to the teachers and principals of literally hundreds of children, asking that the shorter school day be instituted for these individual cases. In only two out of all this number can I remember any objection being raised; and in one of these, a second note worded a little more strongly was all that was necessary. In the other, the mother was "outbluffed" by a reactionary principal, who, later on, after the nervous breakdown which followed this insistence upon the long day capitulated, and allowed the child to come back to class for two hours a day "as a visitor!" It is an interesting corollary to this experience, that in practically no case has it occurred that a child who would have been "promoted" had he kept on with the five-hour day has been "left behind" as a result of the institution of a shorter day; whereas many a child whose promotion has been considered out of the question, judging by his progress on the longer day regimen, has been enabled to go on with his class to the higher grade by this simple expedient. Removing him from the class when his physical and mental limit had been reached, and sending him to school next day well rested and ready for three hours of intensive, productive work has turned the scale.

If such an upsetting thing as this has been done without effort in so many individual instances, it is easy to see what a group of seriously minded, in-

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This Journal has on hand the following, mostly extra copies. Those interested in procuring any of them for public or private libraries address Southern Medicine and Surgery:

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terested parents might accomplish toward the betterment of their own school. Nor need they fear opposition upon the part of faculty and management; an active, alert, and intelligent interest in the school on the part of its parents is what educators have always longed for, and principal and teachers gladly welcome it. With it, they have

always felt that they could remove mountains. And if ever there were mountains whose removal is called for, they exist in some of our schools of today. It will be thanks to the efforts of alert and progressive parents, backing up educators who would otherwise be powerless, if they disappear from our "schools of tomorrow."

REVIEW OF RECENT BOOKS

MEDICAL DIAGNOSIS for the Student and Practitioner, by Charles Lyman Greene, M.D., St. Paul, formerly Professor of Medicine and Chief of Medical Clinic in the University of Minnesota. Author of the Medical Examination for Life Insurance and Its Associated Clinical Methods. Chief of Staff, St. Luke's Hospital. Attending Physician, Miller Hospital; Consulting Physician, State Hospital for Crippled and Deformed Children; Member of the Association of American Physicians, American Therapeutic Society, etc. Sixth Edition revised and enlarged with 14 colored plates, and 709 other illustrations. \$12.00. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street.

This unique volume has come to its sixth edition in steadily growing popularity. Major emphasis is placed on "those physical signs and symptoms new and old, which still constitute the chief aid and reliance of the busy physician."

The arrangement proceeds in an orderly manner from fundamental principles, to case-taking and diseases of special organs.

Interspersed are diseases of unknown causation, a consideration of cough and sputum, and chapters on the polygraph and electrocardiograph roentgen diagnosis, and infection and immunity.

Marginal references on each page greatly facilitate the use of the work as a book of ready reference.

The author's life-long habits of close observation, careful study, and rational deduction, as well as his accurate sense of relative values are reflected in every paragraph.

Its statements are all definite, whether they concern the known, the probable, the possible or the false.

The book is heartily endorsed and will be daily used by the reviewer.

TUBERCLE BACILLUS INFECTION AND TUBERCULOSIS in Man and Animals. Processes of Infection and Resistance, A Biological and Experimental Study, with thirty-one illustrations and twenty-five colored plates, by Albert Calmette, Associate Director of the Pasteur Institute, Paris, Authorized Translation by Willard B. Soper, M.D., Saranac Lake, New York, and George H. Smith, Ph.D., School of Medicine, Yale University. Published by Williams & Wilkins Company, Baltimore, U.S.A.

The object of this work is "to sift out * * * the scientific principles on which to base, in the present state of our knowledge, the campaign against the most terrible of human infectious diseases." And we may say this object has been attained.

A brief historical background is given, and, against this, the established facts and principles of tuberculous infection set forth authoritatively.

In describing methods, when more than one is given, it is stated that a certain one has been found best. There is no vagueness anywhere. The illustrations are instructive and beautiful.

Near a thousand references are given (conveniently at the bottoms of pages) to the literature, for the convenience of those desiring a more elaborate dealing with any special feature.

It is one of the few books whose every page is of value to the laboratory man and the clinician. Incidentally, its study and comprehension by each of these would assist each to a better understanding of the other's problems, and redound to the benefit of the patient.

It's a great book from a great source, with a great aim. This aim will be

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FACTS ON THE HEART. By Richard G. Cabot, M.D., Professor of Medicine and Social Ethics, Harvard University. Octavo of 781 pages with 163 illustrations, Philadelphia and London. W. B. Saunders Company, 1926. Cloth, \$7.50 net.

Four thousand one hundred and forty-three lesions in nineteen hundred and six cases of cardiac disease are reviewed.

It is stated that "most 'heart disease' is imaginary," and that "77% of all heart disease is due to simple hypertrophy and dilatation of the heart without valve lesions."

In the chapter on rheumatic heart disease the valvular lesions are discussed, separately and in combination, as to etiology, physical signs and diagnosis, illustrative cases being cited abundantly.

"Obviously there is very little about treatment in these pages. Most of the little that I know on that subject is to be found in the records or discussions of some of the illustrative cases."

Syphilitic heart disease, myocarditis, angina pectoris, acute and subacute endocarditis, acute pericarditis, chronic pericarditis, thyrocardiac disease, and congenital heart disease are each given a chapter.

It is to be hoped that the citation of errors and defects in the diagnosis will not be allowed to discourage, and that the confession of ignorance of treatment will impel the reader to seek this obtainable and highly-desirable information where it may be found.

MUSCULAR ACTIVITY. The Johns Hopkins University, School of Medicine, Lectures on the Herter Foundation, Sixteenth Course, 1924 by Archibald Vivian Hill, M.A., Sc. D., F.R.S., Professor of Physiology, University College, London. \$2.75, published for the Johns Hopkins University by The Williams & Wilkins Company, Baltimore, 1926.

The four lectures which go to make up this volume deal with the dynamics of muscular activity, the heat production of muscle, the chemical changes accompanying muscular activity and the recovery process after activity in mind. It can be clearly seen that each of these subjects is of interest to all doctors and educated men in general

Perhaps the third and fourth chapters will command most minute attention, for they make up a great part of the life processes. The effects of oxygen, the presence of lactic acid, the processes occurring in the absence of oxygen, the neutralisation of acid in muscle,—all these are sub-heads which indicate the range of the discussion. Sustained muscular action is said to be dependent on the toleration of the muscles for lactic acid.

Credit for the work is generously ascribed to Hartley Lupton, who came to an untimely end at the age of 32.

MEDICAL HEREDITY.—Distinguished Children of Physicians (United States to 1910), by William Browning, Ph.B., M.D., Professor of Neurology, Long Island Medical College; Late President of the American Medical Library Association; Late Commissioner of Inebriety of the City of New York. With an Introduction by Charles B. Davenport, B.S., A.M., Ph.D. Baltimore, The Norman, Remington Company, 1925. \$4.00.

This volume is of great interest to students of heredity in general, of even more to doctors and most to doctors who are the descendants of doctors.

It is recognized that it is impossible to draw a sharp line between heredity and environment.

Far the greater part of the book is taken up with a classified schedule of names and data. A review and commentary, especially when it discusses statistically the "Proportion of physicians' children among persons of distinction" gives food for thought and ammunition for the doctor's gun.

MEDICAL EDUCATION. A Comparative Study, by Abraham Flexner. New York, The MacMillan Company, 1925.

"The present volume attempts to make a comparative study of medical education in certain European countries and America against the background afforded by the general educational and social systems of the respective countries."

Medical schools of the three main types, characterized as (1) the clinical, (2) the university, and (3) the proprietary are sketched in their origins, their functionings and their destinies.

The chapter on general education is a fearless indictment of this phase of the

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education of the doctor in the United States.

The general courses in science in the French schools are intended "to acquaint their pupils with the great laws of nature and to put them in position to understand what is going on in the world about them." Could there be a grander idea or its grander expression?

Clinical instruction, research methods and costs in the various countries are compared and critically discussed.

POST MORTEM (Post Mortems :One) Essays. Historical and Medical, by C. MacLaurin, M.B.C.M., F.R.C.S.E., Hon. Deg. Padua. Lately Lecturer in Clinical Surgery, the University of Sydney; Late Consulting Surgeon, Royal Prince Alfred Hospital, Sydney; Late Honorary Surgeon, Royal Hospital for Women, Sydney. New York, George H. Doran Company.

This book is unique in the reviewer's experience. It is based on the fundamental idea that great persons are interesting; and, whether or not those

discussed were interesting, of themselves, the author's portrayal of them is intensely so.

Anne Boleyn; Jeanne D'Arc; Empress Theodora; Emperor Charles V; Don John of Austria, Cervantes, and Don Quixote; Philip II; Mr. and Mrs. Pepys; Edward Gibbon; Jean Paul Murat; Napoleon I; and Benvenuto Cellini are dealt with as persons, as personages and as patients; or, at least, as diseased individuals. The close study of the evidences of disease discloses the trained clinician: the diction and comment reveal the scholarly, whimsical philosopher: from the whole one gains the very definite impression that far oftener than is generally recognized startling behavior is due to pathological processes and that candidates for political and military office should be subjected to far more careful physical and mental examination, than even candidates for matrimony.

NEWS ITEMS

Resolutions on Death of Dr. W. A. Monroe, of Sanford

The Lee County Medical Society, in its regular meeting Tuesday, March 9, adopted the following resolutions:

Be it resolved, That in the death of Dr. W. A. Monroe we have lost one of our most valued members and the community a great citizen. His passing removes our wise counselor and leaves a great void in our hearts. To the younger physicians he gave freely of good counsel and advice drawn from his rich store accumulated during forty years of practice. His broad fair-minded concept of life and man made him the foremost physician and citizen of his town. To him right was might and in his presence evil slunk away. Ever alert and ready to grasp new ideas in medicine he continually served to his patients the best at his command.

To his family we extend our sympathy and mourn his loss as irreparable.

LYNN J. McIVER, Sec.

Thompson Memorial Hospital, Lumberton, N. C., was opened for patients three weeks ago. This institution is a monument to Dr. N. A. Thompson, the first surgeon to establish a hospital in Robeson County, and who met a tragic death in Fayetteville a few years since. It replaces the original Thompson Hospital, which was destroyed by fire in 1924. Dr. Thomas C. Johnson, who was associated with Dr. Thompson, will have charge of the professional direction, and the widow of Dr. Thompson is vice-president of the corporation.

The Lyle Hospital has been opened in Rock Hill, S. C., under the management of Dr. and Mrs. David Lyle. Dr. Lyle is a graduate of the Medical College of the State of South Carolina and has had extensive surgical training in many of the large hospitals and clinics of the country, and Mrs. Lyle is a splendidly trained nurse of unusual executive ability.

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Dr. John W. McConnell Davidson

The Ames Orth Association meets in Atlanta April 26-28, as a compliment to Dr. Michael Hoke. This is its first meeting south of Washington.

Dr. H. C. Shirley has discontinued his association with the Charlotte Eye, Ear and Throat Hospital and will now maintain offices in the Professional Building for the Diagnosis and Treatment of Diseases of the Nose, Throat and Ear.

Drs. R. W. Petrie, of Charlotte, and L. A. and Gordon Crowell, of Lincolnton, have purchased the hospital at Lenoir, N. C., and will conduct it under the name of Caldwell Hospital. Extensive improvements will be instituted and adequate preparation made to take care of the hospital needs of the large and wealthy area contiguous to Lenoir.

Drs. Fred D. and DeWitt R. Austin wish to announce to the profession the opening of the Austin Clinic of Rectal Diseases, Urology, X-ray and Dermatology, eighth floor Independence Building, Charlotte, North Carolina.

Dr. J. S. Gaul will open offices in the Professional Building, Charlotte, on May 1, for the practice of orthopedic surgery.

The Pitt County Medical Society held their regular March meeting with Drs. Joe Dixon and M. B. Massey as hosts.

President L. C. Skinner presided and after a short business session, in which several vital matters to the Association were discussed, Mrs. J. Knott Proctor rendered several vocal selections. This proved the most attractive feature of the evening.

Dr. C. L. Outland, in his usual pleasing manner, reported the progress which is being made in the tuberculosis hospital for the district. The movement received the support of the Association and several short talks were made in support of same. Dr. M. B. Massey told of the "Relations of Dental Conditions to the Development of Health of Children." He based his remarks on the recent examination of school children for defective teeth. His subject was discussed by several members. Dr. Cecil Garrenton, of Bethel, read a paper on diseases of the feet. Drs. Dowd and Speight, of Rocky

Mount, were guests.

The April meeting will be held in Greenville, with Drs. Ellen and Greene hosts. The program will be featured by papers by Drs. Thompson and Hemingway. The following members were in attendance: Drs. Skinner, Nobles, Wooten, Williams, Garrenton, Dickin-son, Dixon, Massey, Greene, Pace, Laughinghouse, Hemingway, Ellen, Johnson, Smith and Schultz.

Members

Tri-State Medical Association Elected 1926

Dr. Julian M. Baker	Tarboro, N. C.
Dr. Russell S. Beam	Lumberton, N. C.
Dr. Alfred T. Burnside	Columbia, S. C.
Dr. P. J. Chester	Fayetteville, N. C.
Dr. Wright Clarkson	Petersburg, Va.
Dr. T. Dewey Davis	Richmond, Va.
Dr. G. G. Dixon	Ayden, N. C.
Dr. C. B. Epps	Sumter, S. C.
Dr. Powell G. Fox	Raleigh, N. C.
Dr. Thos. A. Hatcock	Norwood, N. C.
Dr. Chas. T. Johnson	Red Springs, N. C.
Dr. Thos. C. Johnson	Lumberton, N. C.
Dr. J. D. Kerr	Clinton, N. C.
Dr. J. M. Lilly	Fayetteville, N. C.
Dr. J. G. Lyerly	Richmond, Va.
Dr. L. B. McBrayer	

Southern Pines, N. C.

Dr. H. H. McGuire	Richmond, Va.
Dr. R. D. McMillan	Red Springs, N. C.
Dr. Howard R. Masters	Richmond, Va.
Dr. Oren Moore	Charlotte, N. C.
Dr. Carlyle Morris	Maxton, N. C.
Dr. R. L. Murray	Raeford, N. C.
Dr. J. F. Nash	St. Pauls, N. C.
Dr. O. L. Parker	Clinton, N. C.
Dr. Thos. A. Pitts	Columbia, S. C.
Dr. J. L. Ranson	Charlotte, N. C.
Dr. J. N. Robertson	Fayetteville, N. C.
Dr. Thos. S. Royster	Henderson, N. C.
Dr. W. H. Sloan	Garland, N. C.
Dr. C. B. Squires	Charlotte, N. C.
Dr. J. L. Tabb	Richmond, Va.
Dr. B. R. Wellford	Richmond, Va.
Dr. R. A. Yarbrough	Louisburg, N. C.

The following members of the Tri-

Dr. C. Howard Lewis	Richmond, Va.
Dr. W. W. Chaffin	Pulaski, Va.
Dr. N. Bruce Edgerton	Columbia, S. C.
Dr. George C. Hall	Richmond, Va.
Dr. V. W. Harrison	Richmond, Va.

OFFICERS OF THE COUNTY MEDICAL SOCIETIES OF NORTH CAROLINA*

County	President	Secretary
Alamance	Dr. John A. Pickett.....Burlington	Dr. R. E. Brooks.....Burlington
Anson	Dr. Robert D. Ross.....Wadesboro	Dr. John E. Hart.....Wadesboro
Avery	Dr. Eustace H. Sloop.....Crossnore	Dr. W. B. Burleson.....Plumtree
Beaufort	Dr. J. C. Rodman.....Washington	Dr. John C. Tayloe.....Washington
Bertie	Dr. Frank Henry Garriss.....Lewiston	Dr. Edgar Powell Norfleet.....Roxobel
Bladen	Dr. Samuel Cromartie.....Garland	Dr. G. C. Singletary.....Clarkton
Buncombe	Dr. Charles C. Orr.....Asheville	Dr. Paul H. Ringer.....Asheville
Burke	Dr. W. H. Kibler.....Morgantown	Dr. G. M. Billings.....Morgantown
Cabarrus		Dr. Joe A. Hartsell.....Concord
Caswell	Dr. S. A. Malloy.....Yanceyville	Dr. H. L. Gwyn.....Yanceyville
Catawba		Dr. K. P. B. Bonner.....Morehead City
Chatham	Dr. T. C. Blackburn.....Hickory	Dr. W. G. Bandy.....Malden
Cherokee	Dr. B. G. Webb.....Andrews	Dr. J. R. Howard.....Bonlee
Cleveland	Dr. J. W. Harbison.....Shelby	Dr. Wm. C. Morrow.....Andrews
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Craven	Dr. R. Duval Jones.....New Bern	Dr. Floyd Johnson.....Whiteville
Cumberland	Dr. W. P. McKay.....Fayetteville	Dr. Christopher S. Barker.....New Bern
Davidson	Dr. J. E. Hobgood.....Thomasville	Dr. J. N. Robertson.....Fayetteville
Davie	Dr. W. C. Martin.....Mocksville	Dr. Grover C. Gambrell.....Lexington
Duplin	Dr. John W. Carroll.....Wallace	Dr. Andrew B. Byerly.....Coolsmee
Durham-Orange	Dr. W. M. Coppridge.....Durham	Dr. R. C. Williams.....Wallace
Edgecombe	Dr. Spencer B. Bass.....Tarboro	Dr. G. T. Watkins.....Durham
Forsyth	Dr. John Robt. Paddison.....Kernersville	Dr. John S. Hooker.....Tarboro
Franklin	Dr. Harry H. Johnson.....Louisburg	Dr. Leroy J. Butler.....Winston-Salem
Gaston	Dr. C. R. McAdams.....Belmont	Dr. S. P. Burt.....Louisburg
Granville	Dr. S. H. Cannady.....Oxford	Dr. J. Sidney Hood.....Gastonia
Greene	Dr. G. C. Edwards.....Hookerton	Dr. W. A. Morris.....Oxford
Gulford	Dr. W. J. Meadows.....Greensboro	Dr. W. E. Dawson.....Hookerton
Hallfax	Dr. T. W. M. Long.....Roanoke Rapids	Dr. Harry L. Brockman.....High Point
Harnett		Dr. E. W. Larkin.....Weldon
Haywood	Dr. T. F. Reynolds.....Canton	Dr. H. C. Turlington.....Dunn
Henderson	Dr. E. P. Mallett.....Hendersonville	Dr. J. R. McCracken.....Waynesville
Hertford	Dr. R. H. Gary.....Murfreesboro	Dr. R. C. Sample.....Hendersonville
Hoke	Dr. P. P. McCain.....Sanatorium	Dr. W. B. Pollard.....Winton
Iredell	Dr. T. V. Goode.....Statesville	Dr. L. E. McBrayer.....Southern Pines
Jackson	Dr. Chas. Z. Candler.....Sylva	Dr. J. E. McLaughlin.....Statesville
Johnston	Dr. L. B. Wharton.....Smithfield	Dr. D. D. Hooper.....Sylva
Jones	Dr. A. F. Hammond.....Pollocksville	Dr. C. C. Massey.....Smithfield
Lee	Dr. Roy G. Sowers.....Jonesboro	Dr. B. W. Page.....Maysville
Lenoir	Dr. Vance P. Peery.....Kinston	Dr. Lynn McIver.....Sanford
Lincoln	Dr. B. M. Bradford.....Lincolnton	Dr. Paul F. Whitaker.....Kinston
McDowell	Dr. R. B. Butt.....Marion	Dr. G. B. Crowell.....Lincolnton
Macon	Dr. S. H. Lyle.....Franklin	Dr. J. F. Miller.....Marion
Madison	Dr. Frank Roberts.....Marshall	Dr. W. A. Rogers.....Franklin
Martin	Dr. Jesse E. Ward.....Robersonville	Dr. Jos. N. Moore.....Marshall
Mecklenburg	Dr. R. F. Leinbach.....Charlotte	Dr. Wm. E. Warren.....Williamston
Mitchell		Dr. John P. Kennedy.....Charlotte
Montgomery	Dr. Alexander F. Thompson.....Troy	Dr. Charles Daligny.....Troy
Moore	Dr. A. McN. Blue.....Carthage	Dr. J. W. Diekle.....Southern Pines
Nash	Dr. H. Lee Large.....Rocky Mount	Dr. A. T. Thorpe.....Rocky Mount
New Hanover	Dr. Ernest S. Bulluck.....Wilmington	Dr. D. R. Murchison.....Wilmington
Northampton	Dr. E. McDaniel.....Jackson, N. C.	Dr. Walter R. Parker.....Woodland
Onslow	Dr. D. M. Henderson.....Swansboro	Cyrus Thompson.....Jacksonville, N. C.
Pamlico	Dr. A. Dees.....Bayboro	Dr. J. J. Purdy.....Oriental
Pasquotank	Dr. Zenas Fearing.....Elizabeth City	Dr. Lev. McCabe.....Elizabeth City
Person	Dr. Bedford E. Love.....Roxboro	Dr. Austin F. Nichols.....Roxboro
Pitt	Dr. Walter W. Dawson.....Grifton	A. M. Schultz.....Greenville, N. C.
Randolph	Dr. C. A. Hayworth.....Asheboro	Dr. W. L. Lambert.....Asheboro
Richmond	Dr. W. R. McIntosh.....Rockingham	Dr. A. C. Everett.....Rockingham
Robeson	Dr. J. Fred Nash.....St. Pauls	Dr. W. E. Evans.....Rowland
Rockingham	Dr. P. W. Feltzer.....Madison	Dr. P. C. Carter.....Madison
Rowan	Dr. P. W. Choate.....Salisbury	Dr. Harold H. Newman.....Salisbury
Rutherford	Dr. Adin Adam Rucker.....Rutherfordton	Dr. Wm. C. Bostic.....Forest City
Sampson	Dr. O. L. Parker.....Clinton	Dr. Paul Crumpler.....Clinton
Scotland	Dr. W. G. Shaw.....Wagram	Dr. Marcus B. Wilkes.....Laurel Hill
Stanley	Dr. C. M. Lentz.....Albemarle	Dr. J. Clegg Hall.....Albemarle
Stokes	Dr. S. F. Tillotson.....King	Dr. R. H. Morefield.....Westfield Rt. 1
Surry	Dr. James T. Smith.....Westfield	Dr. R. C. Mitchell.....Mt. Airy
Union	S. A. Stevens.....Monroe, N. C.	Dr. Raymond Pearson.....Monroe
Vance	Dr. Benjamin G. Allen.....Henderson	Dr. J. H. Wheeler.....Henderson
Wake	Dr. Jos. R. Hester.....Knightdale	Dr. Louis N. West.....Raleigh
Warren	Dr. C. H. Peete.....Warrenton	Dr. H. H. Foster.....Norlina
Washington	Dr. John W. Speight.....Roper	Dr. T. L. Bray.....Plymouth
Wayne	Dr. Wm. H. Cobb, jr.....Goldsboro	Dr. A. G. Woodward.....Goldsboro
Wilkes	Dr. Frank H. Gilreath.....N. Wilkesboro	Dr. Julian E. Duncan.....N. Wilkesboro
Wilson	Dr. G. E. Bell.....Wilson	Dr. C. L. Swindell.....Wilson

*Your assistance in keeping this list revised to date, as well as in supplying medical news notes is greatly desired.—Ed.

OPENING EXERCISES TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

Fayetteville, North Carolina, February 16-17, 1926

The Tri-State Medical Association met in the ball room of the Prince Charles Hotel, Fayetteville, N. C., Tuesday, February 16, 1926, at ten o'clock A. M., and was called to order by Dr. T. M. West, President of the Cumberland County Medical Society.

DR. WEST:

The meeting will be opened with prayer by the Reverend Joel S. Snyder, Pastor of the First Baptist Church of Fayetteville.

INVOCATION

Rev. Joel S. Snyder, Pastor of the First Baptist Church, Fayetteville, N. C.

INVOCATION

Our God, we would recognize Thee at all times and in all places, for we know Thou art the creator of our being by laws of Thine own appointing, and Thou dost provide for our lives through nature and through the knowledge that we may acquire. Thou art also the judge of our moral deeds and our character. So we acknowledge Thee as the author of our being, and rejoice in the glorious fact that in Thee we live and move and have our being. We know that we are not independent, for if that were the case we would live apart from sin; we would live above pain; we would defy death. We pray, therefore, that these facts shall always keep us very humble, and keep our eyes and our hearts fixed upon Thee, the embodiment of all power and love. This morning, at the beginning of this meeting, we adore Thee because of Thy grace; we worship Thee because of Thy holiness; we bow before Thee because of Thy love. We recognize the fact that Thou art making Thyself felt in our world, and we trust Thee as the Father of all grace and goodness. We thank Thee for every expression of Thy Kingdom in our individual lives, and we rejoice that we may take part in its glorious work in our daily vocations. We thank Thee

for the medical profession; for the work it is doing; for the new discoveries that are taking place day by day. We pray Thee that each one, as he gives himself to this particular vocation, may have the inspiration of Him Who went about doing good, the great inspiration of the entire life. We pray that this meeting may be characterized by good fellowship, and by increase of knowledge, so that as we go back to our various places of activity it may be with increased knowledge and with inspiration that may abide with us through all the days ahead. We pray Thee that we may deem ourselves servants of Thine, and that as we go into the homes and into the hospitals we shall realize that we are in God's great family and that we are putting our hands upon His children. This, we pray, may we do in Thy fear, and in full recognition of the responsibility that lies upon us, and may we do all to the glory of God. We ask this in the Lord's blessed name. Amen.

DR. WEST:

Gentlemen of the Tri-State Medical Association: In opening this, the twenty-eighth annual meeting of the society, in behalf of our citizenship and of the Cumberland County Medical Society, I wish to express our extreme pleasure in your presence here today. This historic city has entertained many distinguished persons, but at no time has it been given more pleasure than in welcoming among us this distinguished body. Our only regret is that the exigencies of the program and the demands upon your time preclude us from doing anything more than extending a formal welcome.

I shall now ask the permanent chairman, Dr. W. Lowndes Peple, your President, to occupy the chair. (Applause.)
DR. W. LOWNDES PEPLÉ, President:

Gentlemen of the Tri-State Medical Association, I am not going to make a speech; I am merely going to make a

statement of some of the things that I think are important. For the past year I have been laboring almost constantly with our able secretary, and we have been conferring day by day as to the best type of meeting to have. We believe that the Tri-State Medical Association has a few distinctive features which make it the best medical society in the South. In the first place, it is not so large that it is unwieldy, and there is no necessity for sectional divisions. It seems to me it is always an unwise thing to divide into sections and have surgeons talk to surgeons and medical men to medical men. If we could reverse it, and have surgeons talk to medical men, and medical men to surgeons, and specialists to both, I think it would be far more logical. We have eliminated all social features, so that we can devote ourselves exclusively to work. It is the young man's society, the young man's forum, where he may express himself. It mingles the men of three states, so that we can get each other's viewpoint. In making up the program we have tried to make it so good that the men will be interested and will take part in the discussion and will want to come again. That is one side; the other is that we have tried to make it appeal to the public. The public trust us individually, but they do not trust us as an organized profession. If you do not believe this, go to your next legislature and see the type of men who are

advocating the licensing of all kinds of irregular practitioners. We can not combat this by legislation, because immediately the battle cry goes up—"Jealousy, persecution!" We have to combat it by education, letting the public see that there is no mystery, no secrecy, about our work, but that it is based on common sense. So for this session we have planned the kind of public meeting that we hope will tend to promote better understanding between the laity and the profession.

ADDENDUM

Tuesday, February 16, 1926

During the afternoon session the President read a telegram from Dr. J. deJ. Pemberton, of the Mayo Clinic, Rochester, Minnesota, expressing his regret at not being able to be present. Upon motion of Dr. J. P. Munroe, Charlotte, the Secretary was authorized and instructed to telegraph Dr. Pemberton in reply, expressing the regret of the members of the Association that he was unable to come, and their sympathy in the illness of his children.

PHYSICIAN WANTED

Physician wanted for small town and large country practice. Vacancy due to physician moving to another State.

Write Townsville Drug Co., of Townsville, N. C., for particulars.

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CHARLOTTE, N. C., MAY, 1926.

No. 5

ADDRESS OF HON. THOMAS G. McLEOD

Governor of South Carolina

Delivered to the Tri-State Medical Association of the Carolinas and
Virginia, February 16, 1926

Mr. President, Dr. Moore, Governor McLean, Members of the Tri-State Medical Association, Ladies and Gentlemen:

I am very grateful to my friend for his introduction, and I assure him that there was a time in my youth, before I began to think, when I, too, had hair. (Laughter and applause.) And I am deeply grateful to my brother governor (I am going to make an admission, and do some North Carolina bragging, and say also my kinsman, Governor McLean) for his very pleasing allusions to my own state. I had the misfortune, when quite a small boy, to lose my mother. The good woman who took her place and reared me to manhood was a McLean, of Robeson County, North Carolina, a cousin of your Governor. I liked the family so well that I married her niece, and Mrs. McLeod brags of being the cousin of the Governor of North Carolina. (Laughter.) It is not unusual, in this Scotch country—and I agree with the people of Fayetteville that the Scotch are the best and greatest people on earth—it is not unusual that a race that has contributed so much to the upbuilding of these two states should, after so long a time, be represented. (I am alluding to the race of Scotch, not the liquid Scotch.) (Laughter.) We South Carolinians have felt quite a good deal of pride in your progress, but it would not be characteristic of South Carolinians not to say that we have done something to help towards it. We have done quite a good deal in giving you a start—for two hundred years we bought all our liquor and tobacco from you. We make our own tobacco now, and, I am sorry to say, our own liquor, too, but the old folks say it is not nearly so good as that from North Carolina. (Laughter.)

Dr. Wyman, my friend on the front seat there, told me not to forget to tell a certain thing. It happened that a stranger died in a Florida town, and one of the citizens, a typical booster, was asked to secure someone to conduct the funeral services. He could not find a minister, and when the hour appointed for the funeral came, there was no one to take charge. After waiting for a minute or two, the undertaker wished to inter the body without further formality, but the Florida booster said the man must have a Christian burial, and he would read a few verses of Scripture and say a prayer. After doing this, he asked if any of those present would like to say anything about the life and character of the deceased man, but all were silent. Then said he: "I can not say anything about the deceased, because I did not know him, but if there is no objection I should like to take advantage of this occasion to make a few remarks about the wonderful climate of Florida." (Laughter.)

Just at this moment I am told that the Tri-State Association is invited to meet in the capital city of South Carolina next year, and it is a great pleasure to second that invitation. I am quite sure the citizens of Columbia will give you the usual hearty South Carolina welcome.

You know, we are living in very unusual times; it rather scrambles one's brain. I tell my people that we have to think in the times in which we are living, and, as I just remarked, these are unusual times. My kid boy went down town one day recently and bought some breeches. He is just at the age when he thinks it is very important to be dressed in the latest fashion, so he got some of those trousers that are about as wide

around at the bottom as a woman's skirt. Now, I am not going to discuss ladies' dress; I could not add anything to it, and I dare not subtract anything from it. (Laughter.) It does scramble one's brains.

I never plowed a yearling, as Dr. McGougan and Governor McLean did. The ox I tried to plow was in reverse, and soon put me in reverse. But I got to be a sort of lawyer. My first recollection of the doctor was castor oil. No matter whether the trouble was green apples or what it was, castor oil was always what the doctor meant to me, and I thought that was his equipment, just as for a long time I thought the equipment of a lawyer was an ear trumpet, because I happened to know a deaf lawyer who used one.

Let me be serious just for a moment. Your great profession, which has in its peculiar care and custody, more than any other, the preservation of human life, I think I can safely say, has made more progress in the last fifty years than in any three hundred years previously, and certainly more than any other profession has. Why is it? Is it because they have discovered more remedies that will cure disease? No, for very few cures are known even to the medical profession. It is because those men, following with devotion their profession, have realized that the health of the human family consists rather in the prevention of disease than in its cure, and have tried to eradicate, as far as possible, those things which bring about human suffering exhaust human energy, and call for so much sacrifice. They have sacrificed themselves in the prevention of disease. For three years I have been trying to guide,

as best I could, the ship of state in South Carolina. It is not an easy job to fill such a position, as you know, Governor McLean, for you have been in a similar position for a year. One must be on the job night and day. But it is our duty and the duty of all thoughtful people to serve so that the body politic will be free from the ills of political disease, so that the world and the state and the nation will be an easier and happier place in which to live. By the eradication of wrong and the substitution of right, prevention is the great cure for all political ills. As it is to the physical body, so it is to the body politic.

I am glad to meet these gentlemen engaged in this great work from Virginia, the grand old state associated with all our memories, because when you say Virginia you call to mind the sacred cemetery of the hopes of the South, where our dead lie side by side, having fought for the same principles and made the sacrifice for the same cause. And while we say North and South Carolina, the line between is but an imaginary line. Our people came over here inspired by the same ideals, with the same love of liberty. Our ancestors saw this as a land where their children might have those opportunities that made for manhood and womanhood and that were denied them there. Above all things there must be a healthy body—a healthy physical body and a healthy body politic.

You doctors gathered here are the servants of society. I am glad to greet you, and to meet with the people of Fayetteville, and to join with Governor McLean in expressing our gratitude for your service in the past and our hopes for your abundant success in the future. I thank you. (Applause.)

A LARGE TUMOR IN THE PELVIS OF A MALE ADULT*

ROBERT C. BRYAN, M.D., F.A.C.S.,

and

R. L. CREEKMUR, M.D.,
Richmond

Mr. A., 51, manufacturer, married, one son. Consulted us January 20, 1924, for rheumatism, having been referred by the Martin Clinic, Hot Springs, Ark.

FAMILY HISTORY

Negative. Father killed by a fall, aged 60, mother died of natural diseases, three brothers and three sisters alive. No history of cancer or tuberculosis.

PERSONAL HISTORY

At the age of twelve he had inflammatory rheumatism and was in bed six weeks, starting in the right knee and involving all the joints except the right elbow. The pain was so severe he could not stand the weight of the bed clothes. He never had a return of this rheumatism until October 19th, when it involved the right, and two weeks later, the left sterno-clavicular articulation, then moved to the shoulders, but he was not confined to bed at that time. He denies any infections or contagious diseases other than gonorrhea at 18, which lasted six months with no severe complications. In March, 1923, he went to the French Lick Springs where he was treated by hydrotherapy, local applications and cathartics, and felt considerably better. He returned to his home in Richmond and had his tonsils removed in August. In December, 1923, he went to Hot Springs, Ark., where he had further hydrotherapy treatments and was again benefited temporarily, the joints becoming more supple and less painful. He has never noted any abnormality about himself except that in the last six months there has been a little bleeding after an evacuation from the bowels; occasionally he goes a few days without noticing any blood at all. The blood looks bright red and he uses an adrenalin ointment which relieves it immediately. He has been noticing for the last two or three years that he gets up always once at night to void, and sometimes twice. There is no trou-

ble in starting or stopping the flow, and there is nothing that distresses him other than the pain in the wrists, which, for the last few months, has incapacitated him from all exercises and playing golf.

PHYSICAL EXAMINATION

General appearance: Well developed, well nourished man past middle life, who seems somewhat anemic. Temperature 98.6, pulse 80, blood pressure 120-80.

Skin: Smooth, warm, moist, no cyanosis, jaundice or edema. Scar over back of neck from old carbuncle, and another scar over posterior aspect of the left thorax, about three inches in length, from the removal of a large lipoma twelve years ago.

Head: Symmetrical; normal distribution of hair.

Eyes: Pupils round, equal, regular, react to light and accommodation (pupils rather small). Eye grounds show no abnormal changes; globes move well in all directions.

Ears: Negative.

Nose: Negative.

Throat: Tonsils have been removed; pharynx is pink.

Tongue: Clean, straight, no tremors.

Teeth: Show good deal of recession about the gums with loss of enamel; the upper large left molar is sensitive and probably a little loose, this is to be extracted. Some stiffness of right jaw.

Neck: No stiffness, rigidity or glandular enlargement.

Thorax: Symmetrical; moves well with respiration.

Lungs: Resonant throughout; no rales; no change in voice or breath sounds.

Heart: Apex felt fifth intercostal space 13 cm. to left; no murmurs, thrills or abnormal impulses.

Lymph Glands: Inguinal, popliteal, axillary, cervical and epitrochlear not felt.

Neurological: Rhomberg and Argyle-Robertson negative, patella reflex somewhat exaggerated. No Babinski or Gordon.

*Read before the 28th Annual Session of the Tri-State Medical Association, Fayetteville, N. C., February 16-17, 1926.

Extremities: Considerable swelling of right index finger but no redness; swelling of both knee joints, particularly the right, fluctuation, tenderness, stiffness and limitation of motion, but no redness; there is stiffness and tenderness in elbow joints, hands, right jaw and feet; there is some redness and thickening over the extensor tendon of the left second toe.

Blood: Wasserman 4 plus. Hemoglobin 75%, W. B. C. 5,400, R. B. C. 4,230,000, large mononuclear 6%, lymphocyte 26%, neutrophile 67%, eosinophile 1%. Urea 35 mg. per 100 cc.

Urinalysis: Amber, clear, acid, S. G. 1026, albumin negative, sugar negative. (Voided specimen) Occasional R. B. C., 2-4 W. B. C. to H. P. F. Occasional epithelial cell, small amount of mucus, very slight amount of amorphous matter. (Catheterized specimen) Occasional R. B. C., 2-4 W. B. C. per H. P. F. Occasional epithelial cell. Small amount of mucus, abundant amount of amorphous matter.

Rectal examination: Shows an enormous, symmetrical, tense, painless, fixed tumor, filling the pelvis which apparently springs from the site of the prostate or about the seminal vesicles, neither of which organs could be satisfactorily identified, mapped out or recognized. There is no expression on attempted massage, and there are no lymph glands felt in the pelvis. The patient voids three ounces and there is a residuum of three-fourths of an ounce, the capacity of the bladder is nine ounces. It is noted on filling the bladder that there is an unusually great length of the urethra. The filling of the bladder with a sterile fluid does not seem to disturb or dislodge the tumor, the bladder remaining apparently anterior to and above the growth.

Examination of the abdomen shows a continuation of the pelvic tumor upward, extending within one finger's breadth of the umbilicus, and nearly reaching a line on the right which connects the umbilicus with the anterior superior spine. The tumor is symmetrical, firm, rounded and smooth, one irregularity is felt more anteriorly and to the right, the neoplasm is apparently snugly attached behind the posterior surface of the symphysis, as the finger cannot be inserted between this bone and the anterior margin of the growth. The percussion is flat, and

bimanual palpation, with one finger in the rectum and the other surmounting the growth shows the tumor could be moved slightly antero-posteriorly, but probably a little more laterally. At no time during the manipulation is any pain elicited. The tumor is measured with the obstetrical pelvimeter, one blade being put in the rectum, the other between the legs surmounting the growth, and shows its length $22\frac{1}{2}$ cm., the greatest width above the symphysis being 11 cm. It is further remarked, that the measurement from the upper border of the symphysis pubis to the umbilicus is 15 cm. and that the abdominal excursion of the tumor upward above the symphysis is 12 cm.

Cystoscopic investigation, January 24, 1924: The No. 24 French cystoscope goes through the external cut-off muscle, but it is noted that the prostatic urethra makes a sharp bend to the left so that the instrument cannot be introduced any further. The cystoscope is removed and a No. 24 French sound inserted, which is arrested at the same point in the prostatic urethra. A No. 16 French catheter is then used, and after its entire intromission, gains the bladder and about three-fourths of an ounce of urine is evacuated. The patient is taken to the x-ray room and six ounces of a $12\frac{1}{2}\%$ solution of sodium iodide is injected into the bladder, the tube is clamped and anterior and lateral pictures are taken to determine the size, shape and location of the bladder.

This x-ray as reported by Dr. F. M. Hodges shows the bladder is shoved well upwards and to the left as a crescentic shadow, surmounting the upper margin of the growth. This condition would be represented by an inverted crescent whose free border is tangent to the umbilicus with the concavity downwards, the prostatic urethra being greatly elongated, drawn well to the left side and skirting around the periphery of the tumor, and on account of this displacement cystoscopic examination or catheterization of the ureters was impossible.

January 29th, the rectum is filled with a barium solution and the skiagraph report shows that the sigmoid is shoved to the right iliac fossa and greatly attenuated, there being no apparent excursion on the left. There is considerable ballooning of the rectum corresponding to that part below the tumor and a

marked contraction of the sigmoid caliber towards the upper margin of the tumor, which is identified to the right of the tumor, the sigmoid then swinging to the left to its normal position above the crest of the ilium.

A complete gastro-intestinal barium meal x-ray showed nothing abnormal in the upper abdomen, the stomach, duodenum and intestines were normal, the outlines of both kidneys were evident and normal, the colon larger than usual, which we took to represent the result of pressure distally applied by the tumor.

COURSE

On account of the exaggerated Wassermann, between January 29, 1924, and June 19, 1925, twenty-two intravenous neosphenamine injections were given. This medication was supplemented by lipoiodine in generous doses, and by April 11, 1924, the Wassermann was 2 plus. July 14th, Hemoglobin 100%, when he is given protiodide of mercury in small doses.

December 5th Wassermann 1 plus. At this time he was given mercurisol at Hot Springs, Ark., and the Wassermann found negative.

July 20, 1925, he went abroad and consulted a physician at Baden, who did no serological investigations but guaranteed a cure from the rheumatic pains!!

On his return in September he did not look so well, having lost eight to ten pounds and complained keenly of the pains in his joints, particularly the shoulders, ankles and knees. He attributed the loss of weight to the strenuous treatment received at Baden where, aside from heroic hydrotherapeutic measures, he also had electrical treatment, and injections of a "medicine" into the tissues about the hips, knees and shoulders.

October 1, 1925. The tumor is about the same size, no apparent change has occurred in it, the consistency and fixity correspond accurately with our notes of fifteen months previous, but the patient is losing ground slowly and steadily so that the question arises

DIFFERENTIAL DIAGNOSIS

I. Is the tumor associated with the arthritic state.

II. Should he be treated vigorously and scientifically for his rheumatism and then operated on, or

III. Should the tumor be attacked surgically before he had become too weakened by the relentless progress of a defiant rheumatism.

To this end Dr. Wyndham Blanton and Dr. Manfred Call were called in and asked to make a thorough examination and report their recommendations.

The first question to confront us was the possible character of this enormous tumor which the patient had evidently had for several years.

Embryologically and histogenetically practically all the tissues were taken up seriatim. Of the almost unlimited possibilities for neoplastic consideration the following appeared to be the most reasonable:

I. Specific. During twenty-two months of vigorous antisyphilitic treatment the Wassermann had been reduced to negativity, and the tumor remaining the same size or becoming even larger we could not believe that it was gummatous.

II. Echinococcus. The antigen for echinococcus complement fixation test was negative.

III. Bony structures. Osteoma, osteosarcoma, enchondroma and bony cysts. No bony structures in the tumor or metastases could be noted by the x-ray; there was no bone absorption in the pelvic girdle and the general health continued too good to correspond with the long history of a lethal tumor. We at no time believed the tumor malignant.

IV. Growths from connective tissues or muscle. Fibroma, lipoma, sarcoma (myxolipolympho), myxoma, teratoma, myoma, rhabdomyoma. Albumose in the urine was negative. The tumor felt distinctly cystic, like a fluid densely compressed in a very thick wall. We could not reconcile these findings to the above category of tumor formation.

V. Suppurative origin. 1. Appendiceal abscess; there was no increased leucocytosis and the prolonged chronicity and absence of pain did not speak for abscess. 2. Typhoid in the space of Retzius; no history of a former typhoid and the Widal negative.

VI. Blood vessels. We, at no time, considered aneurism or arterio-venous anastomosis or angiomas; there was no bruit, no thrill.

VII. Retention cyst of the Urachus, and Cyst of the cistern of Picquet. The bladder

would not have been dislodged upwards nor the sigmoid swung to the right fossa, but rather the reverse under these conditions.

VIII. Spina-bifida occulta. No evident bony defect or vertebral cleft, and the tumor had appeared late in life.

IX. Fetal implantation (twins) Dermoid. X-ray negative for bony structures or increased density shadows.

The skiagraph showed clearly the outline of the liver, and kidneys, and indefinitely the spleen so that we did not believe that the tumor was an ectopic abdominal organ which had lost its moorings, and, although it had been impossible to do a cystoscopy, we were of the opinion that there was no supernumerary kidney which had suddenly taken on a hydronephrotic state, and since there was no respiratory excursion but actual fixity, we could not reconcile this state of affairs being represented by an enormous cyst of the omentum or mesentery, or, indeed, encysted peritonitis or intestinal diverticulum or growth.

Our frequent and repeated examinations and investigations confirmed more and more our opinion that the tumor was benign, that it sprang from, or about the pelvic floor, and in its excursion and ascent it had dislodged the sigmoid to the right and growing under the bladder had shoved that organ up to its infranavel bed. The structures that could have given origin to such a condition were essentially (1) the prostate and (2) the vesicles.

Hypertrophy, carcinoma, sarcoma, cyst, echinococcus and gumma of the prostate were considered in detail and abandoned for lack of evidence to incriminate them as the cause of the growth. Diverticulum of the bladder had failed to show by x-ray, and we did not believe that any malicious mucosal or mural bladder growth could possibly assume such enormous proportions without significant evidences in the urine or breaking down and invading the surrounding structures. A consideration of the seminal vesicles led us to the opinion that these organs might undergo a moderate benign cystic dilatation but not any such gigantic size as confronted us in this case. A pretty careful search of available literature showed no tumor of comparable size to have been on record, although the location, cystic character and dislodge-

ment of the bladder and sigmoid corresponded more closely to a vesicular growth than any other organ we could select.

OPERATION

It was decided that the patient should be operated on. He selected the Mayo Clinic and left the first week in October for Rochester. He underwent the usual careful pre-operative examinations and scientific investigations, and received daily for about a month diathermy which markedly benefited his joints. November 6, he was posted in the surgical clinic for operation as "abdominal tumor," no other diagnosis having been made. Dr. Judd operated. General anesthetic, ether, Trendelenberg position. My notes of the operation, which I witnessed, are as follows:

Right rectus from the pubes below to the level of the umbilicus. The peritoneum had been stripped up in the growth of the tumor so that the incision enters the true peritoneal cavity. The intestines are packed upwards, with saline sheets, the cyst is apparently fixed firmly in the pelvis and has a very thick wall incorporating many large blue vessels, which are doubly ligated. The cyst is now drained off with a trocar, about a quart and a half of ropy, darkish material is obtained. The right vesicle is seen surmounting the tumor and to its right, this is the slight unevenness we had felt on the tumor's periphery. The vas is tied and cut, the vesicle left, in inseparable contact, with the tumor, the dissection is slow and the collapsed sac is carefully stripped towards its origin in the pelvis, the ureters are not identified and it is most remarkable that they were not injured. The rectum is embedded in the wall of the tumor and is inadvertently torn longitudinally for three or four inches. This tear is whipped over in three layers, very carefully, with iodized catgut No. 2, there is considerable trauma and oozing requiring many ligatures, the collapsed sac is excised from the structures deep in the pelvis proper and two large tubes bearing iodoform gauze are placed down to this point and brought out at the lower angle of the wound, and a long rectal tube is then inserted beyond the point of the tear. The tissues are brought together in layers, the patient is returned to bed in good condition and two days later declares that he has no pain whatever in the joints and that he feels better than he

has in a long time. The wound drained freely for three weeks, finally closing, so that today, three months after the operation he has returned to his work, is gaining in weight and is apparently enjoying better health than he has since the acute rheumatic outburst of some three years ago, although the wrists and knees are still tender to pressure and incapacitate him from exercise.

PATHOLOGICAL REPORT AND COMMENT

A letter from Dr. Judd, December 12, 1925, describes the pathological report as follows:

"Dr. MacCarty and Dr. Broders, after careful study of the tumor removed in the case of Mr. A., reported it as a multilocular cystadenoma 15 cm. in diameter, containing

thin fluid and a large quantity of cholesterin crystals. There was nothing to indicate any malignancy. The cavities were lined with two layers of cells, a basal layer and a low cuboidal or columnar epithelium. It was impossible to say whether it originated from the seminal vesicle or the prostate."

Examination of the fluid in the sac showed it to be highly charged with cholesterol, and I was told at the Mayo Clinic, before leaving there, that a series of investigations of rheumatic patients had shown their synovial fluids to constantly show a large percentage of cholesterin. Was then the distressing articular state in this patient due to a pressure absorption from this sac, the removal of which so markedly benefited his joints and pain?

MALIGNANT TUMOR OF KIDNEY, EMBRYONIC IN ORIGIN*

Report of Case

HAMILTON W. MCKAY, M.D.,
and

LESTER C. TODD, M.D.,

The Crowell Clinic of Urology and Dermatology, Charlotte

The striking difference in the presenting symptoms in malignant tumors of the kidney in the young child and those in the adult justify their separate and thoughtful consideration. Lesions of the urinary tract in young children have not received such careful attention and thorough application of modern urologic diagnostic study as they deserve, and, in many instances, important lesions in the urinary tract of the child are overlooked, due to a lack of application of the well known refinements of urologic diagnosis, routinely carried out in the adult. To illustrate, it is now generally accepted that a diagnosis of chronic urinary infection, as chronic cystitis or chronic pyelitis, should not be accepted without a thorough urologic study of the child which includes cystoscopy, ureteral catheterization, uretero-pyelography and roentgen ray examination. Such an examination often reveals the basic cause of the chronic infection;

for example, renal and ureteral stone or some congenital malformation—as valves in the posterior urethra, stricture of the ureter or some aberrant blood vessel or band at a level of the lower pole of the kidney which causes the obstruction.

INCIDENCE

From Hinman's tables, it would appear that renal growths are about four times as rare in children as they are in adults, but it is probably not generally appreciated that the kidney is a favorite site for malignancy in infancy. Of all the malignant growths affecting children those involving the kidneys appear to be second in number. In 393 cases of tumors in general in children, reported by Porter and Carter,¹ the kidney was involved in 20%. In 1914 Laughnane obtained statistics on renal malignancy in children from the English records for a period of eleven years (1901-1911 inclusive). There were 430 cases of renal malignancy in children under five years while only 127 occurred between the

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

ages of five and fifteen years.

In the series of some authors like Albarran and Imbert and Mixer males were attacked more frequently than females, but in an analysis of over a thousand cases by Hinman and Kutzmann the occurrence of mixed tumors was equal in the sexes.



Fig. 1.

Girl two years of age. Outline of tumor of right kidney

SYMPTOMS

In the first paragraph of this paper I tried to bring out the fact that the clinical picture of renal malignancy is strikingly different in the young child and adult. Hematuria rarely occurs as a symptom in the young and we think that Mixer has wisely said that there are no early symptoms of renal malignancy in children. The symptom that causes the physician to see the baby is abdominal distension or the actual discovery of a growth by parents or nurse. This can be but another argument for as thorough urologic studies in children as it is our custom to give adults. The early symptoms are so indefinite that we feel that all children with *obscure* abdominal

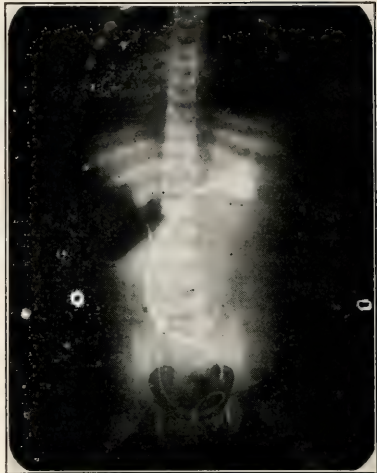


Fig. 2.

Right Pyelogram showing dilatation and deformity of kidney pelvis and deflection of ureteral catheter towards the left past mid-line.

symptoms and general malaise, with or without urinary symptoms, should be given the benefit of a modern urologic examination. Such a procedure carried out by the general practitioner and pediatrician would give the urologist and general surgeon their only opportunity to get these cases early and in this way we may possibly lower a miserably high operative death rate. In the cases that now survive operation, an earlier operation would probably prevent the now almost sure recurrence of the growth.

I wish to repeat that an accurate diagnosis of lesions in young children of the upper urinary tract can only be made with the help of the cystoscope, ureteral catheter, roentgen ray and urography. The following conditions of the kidney in children are to be considered a possibility in a case with abdominal enlargement suggesting a lesion of either kidney. Polycystic kidney (single or multiple), renal cyst, hydronephrosis (often congenital), enlarged spleen and tuberculous peritonitis are the important conditions not uncommonly reported in the literature in babies and their differentiation from malignant growths of the

kidney will often tax the diagnostic acumen of any urologist.

PROGNOSIS

The outcome of these cases can be given in a very few words. Facing the fact of a

been maintained: that the tumors are derived from (1) The Wolffian body, (2) from the embryonic kidney, (3) from aberrant cells of the myotome or other similar structures. Hinman and Kutzmann call attention to the similarities between malignant tumors of the in-



Fig. 3.
Mid-section of tumor mass with kidney appearing as cap at upper pole.

high operative mortality, a very high percentage of recurrences with the distressing ultimate mortality of about 90% it is only just that we apprise the parents of the gravity of such a condition and the meager prospect of relief.

PATHOGENESIS

Various views have been advanced with regard to the microscopic interpretation and pathogenesis. So many classifications have been advanced that it has had a tendency to confuse rather than help the clinician. Three views with regard to the pathogenesis have

been maintained: that the tumors are derived from (1) The Wolffian body, (2) from the embryonic kidney, (3) from aberrant cells of the myotome or other similar structures. Since the renal tumor most usually found in infancy and childhood is of the mixed embryonic type Bendell has suggested as a satisfactory clinical name "mixed tumors of embryonal origin."

TREATMENT

As early radical excision as possible, is the only treatment. Most authors prefer the abdominal route and stress two factors—operative speed and complete hemostasis.

The following case illustrates these three pertinent facts: first, the absolute absence of any symptom except the rapid appearance of a large growth; second, the accuracy of the diagnosis made possible by the application of modern urologic diagnostic methods; third, the rapid and sure destroyer of life this type of tumor is.

Patient's Name—G. L. Date, August 31, 1926. Case No. 14617A.

Address—Chesterfield, S. C., R. F. D. No. 1. Referred by Dr. W. J. Perry, Chesterfield.

Age—2 years 4 months. Female.

Chief Complaint: Enlargement of abdomen.

Family History: Negative.

Past Medical History: Normal delivery. Breast fed. Has never been sick until present condition developed.

Present Illness: While bathing the baby on the 26th of August, 1925, the mother noticed that its abdomen was larger than normal. The child had no symptoms and has never been sick a day in its life. The baby was taken to the family physician, who brought the child the next day to the Crowell Clinic for a diagnosis.

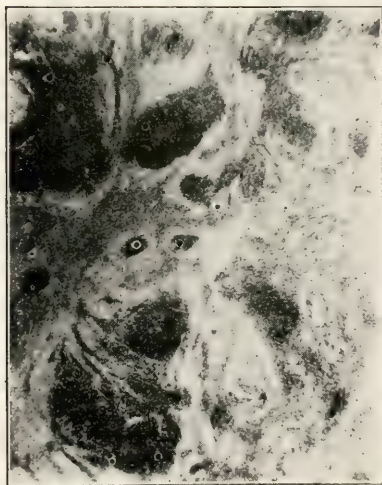


Fig. 4.

Low power photomicrograph of tumor mass proper showing the less dense myxomatous tissue mottled with the more dense mesenchymal condensations.



Fig. 5.

High power showing the mesenchymal cell type

Examination: Well nourished and apparently a normal baby in every respect except for the local condition. Abdomen was quite distended—more on the right side than on the left. On palpation a large tumor-like mass—irregular in outline—slightly movable and apparently attached in the right flank. It could not definitely be determined by palpation whether the tumor was a firm growth or a tense cyst. Cystoscopy, ureteral catheterization and urography were determined upon.

Cystoscopy: A small baby Wolfe cystoscope was used. The bladder was normal in every respect. Both ureteral openings were normal in appearance and normal in location. An attempt to catheterize right ureter with a No. 5 F. radiographic catheter was unsuccessful. A No. 4 F. catheter, non-radiographic, was passed to the pelvis of the right kidney without difficulty. A No. 5 radiographic catheter was passed to the pelvis of the left kidney. The left kidney was functioning normally. Only a drop or two of urine could be obtained from the right kidney. A pyelogram with neo-silvol was made.

Laboratory Findings: Blood 9-2-25 Hgb. 10.55 gm. per 100 c.c. (61% Sahli)

W. B. C. 24,700

R. B. C. 3,580,000

Wassermann negative

Blood 9-7-25—W. B. C. 22,400.

Bladder Urine 8-31-25: Acid. Definite trace albumin. Glucose negative. Sediment: Pus cells numerous (in clumps), no casts, no blood.

Culture of Bladder Urine of 8-31-25: No growth after 48 hours' incubation.

Bladder Urine 9-2-25: Acid. Glucose negative. Albumin decided trace. Sediment: Pus cells numerous in small clumps, no blood, no casts, no bacteria.

Urine from Ureters 9-2-25: Right—No pus, R. B. C. numerous. Left—No pus, blood abundant.

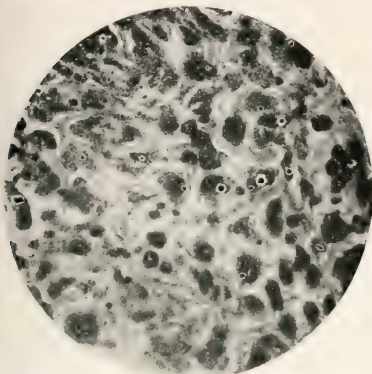


Fig. 6.

Low power of one of the more actively proliferating nodules at the border of tumor and in the kidney tissue.

X-ray No. 2698 8-31-25: Increased density in region of mass especially over lower lumbar vertebrae. Not sharply demonstrated—not satisfactory. Cystogram and barium enema would be of service.

9-2-25 Right Ureteropyelogram: Ureter deflected by tumor mass past mid line and to the left. Pelvis of kidney is dilated and rounded in outline with loss of all calyx detail.

Opinion Prior to Cystoscopy: Several men examined this case and the opinion varied. The following diagnoses being made: Polycystic kidney, simple cyst of one kidney, an ovarian cyst, malignant tumor of right kidney—probably embryonic in character.

Pre-Operative Diagnosis after Ureteral

Catheterization and Pyelogram. Malignant Tumor of the Right Kidney.



Fig. 7.

A higher power view of the section in Fig. 6. In the center of the cellular condensations are tubules lined by columnar epithelium which simulate and apparently are derived from the embryonic anlage of the primitive urinary organs. The area marked [] is seen in high power in Fig. 8.

Operation: Date 9-8-25. Transperitoneal nephrectomy done under ether anesthesia. No difficulties encountered during the operation except when the large tumor was delivered from the abdomen, profound shock followed. Intravenous normal saline solution given on operating table. Wound closed without drainage. The baby reacted well from the operative shock and left the hospital in about 18 days apparently in good condition.

Pathological Report: Right kidney tumor removed 9-8-25. Weight 1127 gms (20x13x9 cm.) Summary: There is a large neoplasm of the lower pole of kidney. Kidney itself appears as a thin cap at upper pole. Microscopically—The growth is seen to be a typical mixed embryonal tumor of the kidney (Wilms' Tumor).

Bladder Urine 10-21-25: Acid. Glucose negative. Albumin negative. Sediment: No pus, no blood, no casts, no bacteria.

Note: The baby returned in about three



Fig. 8.

High power of area marked [] in Fig. 7.

months with extensive recurrence in site of operation and signs of pulmonary metastasis.

CONCLUSIONS

1. There appear to be no dependable signs or symptoms of renal malignancy in childhood.
2. Only by more thorough urologic study in suspected cases can we hope to cope with the distressing mortality.
3. The child with suspected kidney tumor should be given the same careful urologic study applicable to the adult.

BIBLIOGRAPHY

1. Porter, L., and Carter, W. E. *Am. J. Dis. Chil.*, 1920, XX 323.
2. Hinman and Kutzmann, *Am. Surg. Phil.*, Oct., 1924. 569-589.
3. Mixer, C. G., *Am. Surg. Phil.*, 1922. LXXVI.
4. Mogoun, J. A. H., and MacCarthy, W. C., *Surg., Gyn. and Obst.*, Chicago, 1923. XXXVI, 781-786.
5. Cabot's *Modern Urology*, Vol. 11, p. 668.

PROSTATIC OBSTRUCTION AS SEEN BY THE GENERAL SURGEON*

EDMUND S. BOICE, M.D., F.A.C.S., Rocky Mount, N. C.

From August 1, 1914, to February 1, 1926, there were 11,893 admissions to the Park View Hospital. Of this number, 46 patients came in because of hypertrophied prostate and were treated by my associate, Dr. B. C. Willis, and myself. Not one of these patients was in condition for operation when admitted, while 42 had been forced into the hospital by some emergency, usually acute retention (40 cases). Invariably there was the prostatic history going back months or years, yet in many instances the patient had not consulted a physician until the onset of this emergency. A fair number had suffered one or more previous attacks of retention and been relieved by catheterization, and did not come to the hospital until further catheteriza-

tion was impossible. Sometimes the physician had not recommended anything further after the bladder had been emptied; more often the patient had refused to consider hospital treatment except as a last resort. Naturally a number of urethras had been badly traumatized making further attempts at catheterization difficult or contra-indicated altogether, though we succeeded in passing a soft rubber catheter in 39 instances.

In these catheterized patients no other form of drainage was used and thus far we have not found a patient who could not tolerate an indwelling catheter as long as necessary. In 7 instances a suprapubic cystostomy was necessary, and for 6 of these we used the trocar and canular method advocated by Lower and others, slipping a catheter through the canula into the bladder for gradual emptying and further drainage. In addition to gradual decompression (1 or 2 days) where

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indicated and constant bladder drainage, we of course follow the accepted plan of forcing fluids, free bowel elimination, restricted diet and not too much confinement. We also believe fully in McNider's plan of protecting the kidneys with alkali, usually using soda. A competent internist has charge of the patient's heart, lungs, kidneys, and general condition throughout his stay in the hospital. The kidney function (phenolsulphonphthalein given intravenously), blood urea, routine urinalysis and twenty-four hour output are checked up at suitable intervals. The specific gravity is watched closely from day to day as we feel that this test furnishes the best single index to the real ability of the kidneys.

Regardless of what other examinations show we have declined to operate until the specific gravity is at least 1.010, preferably higher, on a number of observations. The routine examination also includes complete blood count, coagulation time, and blood Wassermann, though it must be borne in mind that a negative blood Wassermann does not necessarily exclude tabes. While we appreciate the value of the data obtained by cystoscopy, especially where diagnosis is doubtful, we have not undertaken it as a routine in prostate cases. Many times catheterization alone was difficult or impossible, and attempts at cystoscopy in such cases would have been useless, if not actually dangerous. The history, and the physical and other examination, including x-ray and possibly cystogram, will go far in making up for the lack of cystoscopy.

Of the total of 46 patients only 29 were operated. Of these 29, five were under 60 years of age, ten were between 60 and 70, and fourteen were between 70 and 82. Of the 17 patients not operated, two were under 60, seven were between 60 and 70, and eight were between 70 and 79. None of these was gotten ready for operation under a week and usually a considerably longer time was needed. Sixteen cases required between one and two weeks, 4 cases took three weeks and in 9 cases four to eight weeks were necessary.

One patient, an edematous, dyspneic man of seventy-seven, was completely relieved by a punch operation with the Braasch instrument, and remained free of bladder symptoms until his death from heart failure eighteen

months later. In 28 cases the prostate was removed by the suprapubic method, with a gauze pack for the prevention of hemorrhage. Ether by the open drop method was used in twenty cases, while a combination of ether and local anesthesia was used in eight cases. The kidneys were protected by soda, and morphine gr. 1/ with atropine gr. 1/100 was given routinely before operation. When necessary two or three ounces of ether can be made to suffice, and with proper precautions little if any harm should result.

Aside from acute retention and the varying degrees of kidney insufficiency, myocardial changes, etc., usually found in these old men the following complications were present before operation. Three patients had severe bronchitis. Five had one or more stones in the bladder, in one case as many as 128 unsuspected calculi being found at operation. Another patient had a stone in the right kidney and one in the ureter with considerable secondary pyelitis and cystitis. Another had an incarcerated right scrotal hernia with a distended bladder in the hernia sac. Prolonged preoperative treatment was required in another instance to clear up a severe acute kidney and bladder infection. One patient was admitted because of hemorrhage of several days' duration, presumably coming from the bladder. This patient also later developed an epididymitis during preparatory treatment with an indwelling catheter.

One patient had a considerable hemorrhage through the urethra six days after operation. This stopped spontaneously before the pulse became affected and did not recur. One patient died from hemorrhage and shock secondary to an ill-advised attack on a carcinomatous gland which was too far advanced to admit of complete removal. A transfusion might have saved this case but a suitable donor was not available. Post-operative epididymitis occurred but once and cleared up promptly. One man of seventy-five developed a localized osteomyelitis of the pubic bone with sequestrum formation which considerably delayed, but did not prevent ultimate complete recovery. He is still well and active at 84, 7 years after operation.

Two patients developed severe kidney infections late in post-operative convalescence but eventually recovered, one rather promptly, the other only after a long-drawn-out

course.

The last patient to be operated on died four days after one of the easiest operations in the series. There was a minimum of hemorrhage and no shock, but apparently some infection developed which precipitated a kidney breakdown. The blood urea increased rapidly to 174, coma developed promptly and death ensued in a few hours. This patient, who was a retired merchant 72 years old, fat, anemic and dyspneic, had given us more concern than any other we have considered for operation. While his blood urea was 36 and phenolsulphonphthalein output 46 before operation, the specific gravity remained below 1.010 for four weeks, and did not exceed this figure but four times throughout his pre-operative treatment which lasted twice as long as any other case.

The prostate was very large, effectually prevented cystoscopy, and at times almost made catheterization impossible. Palliation offered but little and the patient decided against it.

All of the 17 patients who were not operated were suffering from acute retention when admitted. Three were moribund, or nearly so, from uremia and died in coma, while a fourth was dyspneic and edematous from a failing heart and died suddenly ten days later. One patient, aged 73, was so badly impaired by chronic nephritis that we advised against operation. He is still living with no recurrence of retention after two and a half years, but in very poor health. Another case had a severe kidney infection with high fever for three weeks. We finally let him go home with a retention catheter which he was able to discard after a month. He died a year later, cause unknown. Eleven cases refused operation. Three declined to remain in the hospital longer than for the relief of their retention, two of them going home with a catheter strapped in the urethra. One of the three, after seventeen months, has not been obstructed completely again.

One remained dependent upon catheterization until his death a few months later. The third continues to live a catheter life after three and a half years.

Three patients were very poor risks whom we were able to improve but little, and they probably acted wisely in refusing operation which was offered but not urged. One of these is still leading a catheter life after six months. One died in three years without further retention. The third, after two years, has had one other severe attack, and frequently has some trouble.

The remaining five apparently were as good risks on the average as were the operated cases, and we felt justified in urging them to submit to operation before further kidney damage took place.

One of them returned in four years with a hopeless advanced carcinoma of the prostate from which he died shortly afterward. Another died from kidney breakdown following three separate attacks of acute retention. Two have gotten along well for eighteen months. The fifth case has been lost track of.

From the above it is seen that of the 17 patients not operated six are known to have died as a direct result of their prostate trouble, while the prostate must be looked upon as a contributing cause of death in at least one other case. Two others are dead of unknown cause, and two are living a catheter life with all its inconvenience and danger. The remaining six are getting about more or less actively it is true, but they still have their nocturia and are steadily increasing their kidney damage, while the possibility of acute retention is ever present.

Of the 29 operated cases 22 are living and, so far as bladder disturbance is concerned, practically or entirely well from a few months up to ten years after operation. Two died immediately following operation. One died of recurring carcinoma about two years after operation. Two died of heart failure fourteen

and eighteen months, respectively, after operation. Two others have died of unknown cause, one at the age of 75, five years after operation, the other at the age of 79, seven years after operation. All, except the carcinoma case, remained free of bladder disturbance until death. In addition to the three cancer cases mentioned, two other glands showed early carcinoma microscopically. So far recurrence has not developed two and one-half and four years, respectively, after operation.

In reviewing the records of this small number of prostate cases we have wondered whether the proportion of 46 patients in

practically 12,000 admissions is on a par with the work going to other general hospitals. Also, do general surgeons elsewhere see the same high proportion of neglected cases? If so, is it justifiable, even in the face of an operative mortality of almost 7%, when one considers the mortality and morbidity among non-operated cases? Or when we consider that there is a time during the easily recognizable stages of the disease in practically every case when operation could be done by the average general surgeon with almost no mortality and a minimum of morbidity.

DISCUSSION OF GROUPED UROLOGICAL PAPERS*

Dr. M. H. Wyman, Columbia:

We have had eight very delightful papers, which we are to discuss as a urological symposium. Some of the men contributing these papers devote their entire time to urology, the rest being general surgeons. Dr. Highsmith covered his subject of pyelitis very thoroughly and satisfactorily. I treat pyelitis of pregnancy by the use of two No. 6 ureteral catheters. These two catheters not only drain better, but you can insure continuous irrigation through one, allowing the solution to flow out through the other. One should be very careful not to allow the fluid to go in faster than it comes out. You can regulate the rate of inflow by using an apparatus similar to the Murphy drip. If you intend to take the catheter out immediately after lavage, it is all right to use silver nitrate. Should you, however, desire to leave the catheter in the ureter, silver nitrate

should not be used, as it will coagulate and cause the pus and coagulum to block the catheter.

The pre-operative and post-operative care of prostatectomy cases is on a fairly firm foundation at this time. By the combined use of all methods in our hands, such as the phthalein kidney functional estimation, blood urea, specific gravity, and the general appearance of the patient, including his blood pressure, we can very accurately determine what type of a prostatic risk we have. Usually, I much prefer, with the average case, a two-stage suprapubic prostatectomy. Certain cases require considerable time to make the patient a suitable risk for the final stage of the prostatectomy. I had one case that it was necessary to hold over two months after the first stage cystotomy, before I could enucleate the hypertrophied prostatic gland tissue. He was finally operated upon, and is in excellent health now, at the end of two years after being discharged from the hospital. This is exceptionally long;

*Other papers in this group published in issue for March and April.

usually from one to two weeks between stages of the prostatectomy will get the average case in suitable condition for the final operation.

It is well to remember that you can have an inflamed enlargement of the prostate which will cause an obstruction with residual urine. I have known of a man being admitted to the hospital with a complete retention of urine. His bladder had been decompressed with a catheter, and later a cystotomy was done. The enucleation of the prostate was attempted after a wait of two weeks, at which time the general surgeon found that there was no prostatic tissue to be removed. The vesical orifice, the trigone, and even the right ureteral orifice, were badly traumatized during the manipulation in attempting to remove something which was not present, the result being that the man developed a right-sided pyelitis which caused him considerable pain and fever for a time. Cases of this nature are very embarrassing, but by means of the cystoscope we can fairly accurately determine whether the obstructing prostate is enlarged from inflammation or from a true adenomatous hypertrophy. Occasionally one will have serious consequences from a too rapid decompression of a distended bladder. However, bladder decompression is not a very difficult situation to handle. If you care to use a can with a rubber tube attached to the catheter, as Dr. Pittman described, it is a very safe procedure, but consumes too much time with the average case. When an old distended bladder is first catheterized, it is safe to draw off, say, not more than ten ounces of urine, and you may allow the catheter to remain in the urethra and draw off a few ounces every hour or two by this method, forcing water by mouth, and at the same time you can safely and more quickly empty the bladder than by using a can and tube attached. Usually in twenty-four to forty-eight hours you can safely decompress any bladder. It is well to bear in mind, however, that the long-standing cases should be more gradually decompressed.

The phthalein kidney functional test, with the proper technic, I consider the most accurate method of deciding whether or not a patient is a good surgical risk. You should standardize your method. I use intravenous phthalein altogether. If I desire, after hav-

ing determined the combined function by an intravenous phthalein, to catheterize each ureter and get the comparative function of each kidney, the intramuscular method would be too slow. Five minutes after the dye appears red in the urine after an intravenous injection of phthalein, you will get one-third of the total percentage that will be returned in a half hour. The first ten minutes after will send down about one-half of the percentage that will be returned for a half hour; the first fifteen minutes you get about three-fourths of the total half-hour output. Of course, as I have said, I favor not only using the phthalein, but determining the blood urea content, specific gravity, and every other available method at our disposal. These will be parallel, but you will find, when these various tests are accurately performed, that the phthalein will give the quickest and most reliable information of any. The reason I do not put much reliance in specific gravity as a pre-operative indication of the patient's improvement is because usually we force large quantities of water on these patients, which will naturally dilute the urine. Forcing water, and keeping the prostatic cases up in a rolling chair, or propped up in bed, are the two most important elements in the pre-operative and post-operative care of the prostatic cases.

Dr. Price presented a very important subject in a very able manner. He showed conclusively what can be done with the sexual neurotic. The sexual neurotic suffers more mentally than all the combined neurotics together. These patients often fall into the hands of indifferent practitioners, who treat their complaints lightly, some even making fun of the patient. Be just, be true, be fair, to the sexual neurotic everywhere. Their complaints are many, but, remember, some diseased organ is to blame.

Dr. J. P. Munroe, Charlotte:

I want to express my hearty commendation of the program as arranged, and tell you how much I have enjoyed this part of it.

In this matter of making a diagnosis, the tendency with all of us—or not all of us, perhaps, not men like Dr. Bryan and Dr. Crowell and Dr. McKay, who investigate everything, but the tendency of the majority

of doctors—is to follow the line of least resistance. A patient came to me last week with severe headache. He had had it for two years, and had been treated by seven or eight doctors. I asked what was the diagnosis, and what they had done. He said, "Well, there was no diagnosis except headache, and they have given me various medicines." The same thing occurs when there is frequency of urination. Too often we prescribe a little medicine, and the patient gets temporary relief—and that is frequently the only relief he gets. Dr. McKay says some of these cases are probably neuros—that is, neurasthenics. Well, probably they are. I had a case come in the other day, an epileptic, but the thing most important to her mind was that she frequently urinated before, during, and after a convulsion. Frequency of urination was the important thing, to her mind.

An important point brought out is that by thorough study and effort, and by using all the means at hand, we can find out what the trouble is. Another point is that if people have plenty of money they pick up and go to Hot Springs or to Germany—Baden, I believe it is—and are treated. What are they treated for? At Hot Springs for syphilis and rheumatism; at Baden for rheumatism, by injections of something, we do not know what. It is all right to treat syphilis, of course, but the proper thing to do is to do as Dr. Bryan did, investigate thoroughly. With what? His own fingers, his own touch, his own physical findings; then he used laboratory procedures, and used his own cystoscope. He even used an obstetrical instrument. Use anything that may be necessary; that is the real way to find the cause of the trouble.

Dr. J. Vance McGougan, Fayetteville:

I am very sorry that I did not hear Dr. Price's paper; in fact, I have just gotten here. I heard Dr. Munroe's discussion, and I think he is just a little ahead of his story. My experience has been that this class of patients of whom Dr. Price was talking does not go to Hot Springs nor to Baden, but that most of them fall into the hands of osteopaths or chiropractors. Two years ago I paid my respects to them, so I shall not say anything else about them, but, gentlemen, I am afraid that the laity do not quite understand us. I am afraid that the laity are not quite giv-

ing us credit for the work that a time-honored profession and an honest profession (I do not intend that for the others) is doing. It seems to me that a body of men like this, certainly the representative men, the leaders, I might say, of three states, is the medium through which we have to get closer to the public. Now, what is at fault I do not know. I am inclined to believe with Dr. Munroe that it is largely due to a diagnosis that does not stand. Men like Dr. Bryan, who diagnose cases and go into them, get results, but if we handle them in a slipshod way, so to speak, they will then slip out of our hands and get into somebody else's hands, and sometimes they get results. What we should do at this time I do not know, but we are not close enough to the public at large. Some of the people have gotten away from us, and I am afraid they are a little bit suspicious about our way of handling and doing things. As I said in the beginning, it is up to a body of men like this to have some better understanding. We must do something to ingratiate ourselves into the hearts of the public, and that we have not done so far. (Applause.)

Dr. F. B. Johnson, Charleston:

All of these papers have brought home things to us who are not urologists. What I want to discuss, particularly, is renal tumors in children. We had a case at the Roper Hospital, in the last few weeks, with almost identical symptoms to the one discussed by Dr. McKay. This was a child twenty-four months old, a negro female. She had no symptoms until a month previously, the mother said, when she complained of pain in the left side, and the mother then noticed a tumor. This was in the left upper quadrant. The case was brought to the hospital and examined thoroughly. Being on the left side, there was some difficulty in saying whether it was the kidney or the spleen. It was a very firm tumor, and extended up to the costal edge, but, upon thorough examination, x-ray and cystoscopic examination, and catheterization of the kidney, we decided it was a renal tumor. On catheterization we could not obtain any urine at all from the left kidney; the catheter became stopped with blood. The urine from the other kidney was about normal, and the bladder urine

showed some blood. It was decided to operate, and the child being very anemic, with a moderate leucocytosis, and knowing the danger of severe hemorrhage, we gave a blood transfusion just before the operation. A tumor about 15 by 7 centimeters in size was removed by Dr. J. Sumter Rhame, and, upon examination, proved to be an embryonal tumor of the kidney. This case was operated on about three weeks ago, and is doing very nicely. Of course, the prognosis in this type of case is bad, but we think the transfusion had a great deal to do with the child's getting over the operation.

Dr. Finley Gayle, Richmond:

I thoroughly agree with Dr. Price that the sexual neurasthenic is not sufficiently sympathized with and is greatly misunderstood. I want to take issue with him in reference to the verumontanum as the primary cause of sexual neurasthenia. This is a physical basis, but we feel that the real cause is very much deeper. Inflammation of the verumontanum is, in my opinion, usually the result of sexual excesses, either masturbation or intercourse. Dr. Price gets results from treating the verumontanum for the reason that he relieves certain sensory disturbances in the genital region, which encourages the patient and helps take his mind from that particular part of his anatomy. The average individual does not like to be told that the cause of his symptoms is psychic, and when he is told that there is a physical cause and by treatment of the verumontanum the feeling of pressure is relieved, as well as other disagreeable sensations, probably premature ejaculations, the patient feels better and has something on which to hang his "nervous hat." I believe that this type of treatment, as suggested by Dr. Price, should be carried out, but we should not fool ourselves that this is the primary cause of the psychic maladjustments. Psycho-analysis, encouragement, guidance, and things of that sort are the things that really accomplish the beneficial results.

Dr. R. L. Payne, Norfolk:

One can not discuss things in a few moments, but can make a few dogmatic statements, and I hope you will accept my apologies for using my time in that way.

First, as to hexyl resorcinol or caprikol, I have been disappointed. We have not gotten results, and we have given it a faithful trial. I believe there are many men of wider experience than myself who have failed to get results with caprikol.

I was very much impressed by Dr. Boice's remarks about the specific gravity in prostatic cases. I abandoned at least three years ago the phenolphthalein test in determining the operability of prostatic cases. We strive to determine the ability of the kidney to concentrate, which is determined by the specific gravity and, secondly, by the urea nitrogen. To get the urea nitrogen down to a normal level and to retain that level for a reasonable length of time is better than any other measure I know.

I want to congratulate Dr. Crowell, and to say that his method of timing the emptying of the renal pelvis is admirable, and I shall adopt it at once. I disagree on one point, and want to say that we can make a diagnosis of stricture with a bougie but not a bulb.

Dr. Bryan's paper is extremely timely, for there is no doubt that there is often an embryological epithelial occlusion between the rectum and the bladder in the male and the rectum and the vagina in the female which later takes on the form of an adenoma or fibroma or cystic adenoma. I have seen three of these, two in women and one in a man. It is a curious fact that these types of tumors, fibro-adenomatous in character, occur in the female under forty, and are commonly reported in the literature in the male over fifty. That is an important thing. Dr. Thos. Cullen, I think, first called our attention to this type of tumor before the Southern Surgical Association in a presentation entitled "Fibro-adenoma of the Recto-Vaginal Septum." Last spring I delivered a fibro-adenoma the size of a coconut from the pelvis of a man, which had to be delivered with obstetrical forceps. I have in the hospital now a young woman who had a tumor of the recto-vaginal septum. Pathological examination showed a definite adeno-carcinoma. I think Dr. Bryan's case falls under this classification.

Dr. Warren T. Vaughan, Richmond:

"Rational therapy" in any disease may be divided into three procedures: First, removal

of the cause, if possible; second, the removal of the pathologic conditions resulting from the activity of the cause; and, third, treatment of the individual symptoms as they arise. In Dr. Price's work the first aim in rational treatment should be removal of the cause, which is probably chiefly psychic. At the same time there is a congested, hypertrophied verumontanum in a great many cases, and, whether this be cause or effect, rational treatment again demands treatment of this also.

May I paraphrase Dr. McGougan's remarks concerning thorough examinations, and the remarks that have been made concerning quacks and chiropractors?

If you practice "hit or miss" medicine you may hit and you may miss. If you miss, the next man, likewise practicing "hit or miss," may hit! Now, he may be a chiropractor or a what-not. But, as long as you are practicing "hit or miss," don't blame him, blame yourself—for *you* had the first chance!

Dr. R. F. Yarborough, Louisburg:

I should like to speak a word for the general practitioner. We have to refer a great many of our cases to the specialists, and, along the line of pyelitis, I have found that in probably 99 per cent. of the cases that I referred, where there was any infection, there was a report of pyelitis. I am forced to believe that must be a secondary condition, and if the general practitioner will use his hands and his head he will keep lots of these cases out of the specialists' hands.

As to the last paper, on neurasthenia, I am forced to believe there is a great deal of that, and if we would do our duty and talk to the parents and teach the children to think clean and live clean we would do away with masturbation.

Dr. L. T. Price, closing:

I have felt for a long time that we have not been pursuing the investigation of pyelitis as it might be and probably should be carried out. Recently the question of focal infections has played such a great part in so many diseases that we have come to realize that focal infection probably plays the greatest part in the causation of pyelitis, but, on the other hand, the metabolism or digestion, we might say, in the kidney is disturbed and solids, and fluids which should be disposed of

through the kidney are not properly eliminated. We know that in *b. coli* infections alkalization of the urine will invariably relieve the pyelitis. It may be in other cases that if we would follow out this particular line of thought there might be some further light thrown on the subject. I feel that autogenous vaccine in the treatment of pyelitis, and particularly of pyelonephritis, is of unquestionably value. The question of stasis plays an important part in pyelitis.

As to prostatic conditions, I think there is no class of work we have to do that really requires any more ingenuity than to bring these old men through their difficulties and complete a case with them well and voiding. I want to emphasize the preparatory treatment. I have found that the inlying catheter has been universally successful. As to the use of the various tests, specific gravity, etc., I think all of them should be used. In other words, do not rely on any one particular thing. The specific gravity unquestionably is the most important of the three, but I do think the phthalein and the blood urea are also of immense importance. I think the keeping of these men up before operation, and getting them out of bed immediately afterwards, is of the greatest importance.

Dr. Bryan, closing:

There is so much to say I hardly know where to start. About pyelitis I want to say this. I have had a right fair experience with pyelitis, and I believe I am right. I feel particularly that I am right, because not very long ago I had my good friend, Dr. Young, from Baltimore, down in consultation on a case which had perplexed me. The patient was vomiting all the time. He said change the reaction of the urine. He did not say, "Alkalinize it," but "Change it; make it alkaline for four or five days; then make it acid. The bugs say, 'This is no place for me,' and come on out."

Another thing—don't catheterize an acute case of pyelitis; leave the simple acute cases alone. You will traumatize the membranes; you will do irreparable injury. Don't use a catheter, but use water, plenty of it all the time, internally and externally and eternally. The simple acute cases will clear up in a few days or weeks on water.

In prostate cases, with the back pressure,

retention, high blood urea, low phthalein test, hexyl resorcinol or other drugs are not indicated, and I do not use them. I never use the one-stage operation—never. I do only the suprapubic operation.

Dr. Boice referred to the gauze pack.

Formerly I got infections from the gauze pack in the prostatic cavity; now I use only Hagner's bag.

I agree with Dr. Payne that you can help with the olivary bougies as well as with the catheterization.

TULAREMIA*

With Report of a Case

T. DEWEY DAVIS, M.D.,

and

DOUGLAS VANDERHOOF, M.D.,

Richmond

Case Report: Mr. G., aged 48, married, a farmer by occupation and a native of Surry County, Virginia, was seen January 18, 1926. He complained of fever. Nothing of significance appeared in the family or past history except that he had been troubled for years with a mild indigestion. His average weight was 170 pounds, and he weighed 167 pounds at the time of examination.

His present illness began on the night of December 28, 1925, with a sudden rise of temperature to 102 degrees. With this he had a little headache but no other symptoms. The fever persisted for three days and then subsided, remaining normal for two or three days, when it reappeared and has recurred at irregular intervals. He had no chills at any time and quinine had no effect. Coincident with the onset of temperature he noticed an enlarged, tender gland in the left axilla.

Complete physical examination was negative except that several tender glands were palpable in the left axilla, and a small ulcer was noted just back of the nail margin of the left thumb. This was about 3 mm. in diameter with smooth edges and was covered by a yellowish scab. Surrounding it was a reddened, slightly indurated area 1 cm. in diameter.

Tularemia was suspected and further questioning elicited the following facts: On De-

cember 25, 1925, patient dressed two cotton tail rabbits. Three days later he noticed a reddened area at the site of the lesion described above. At the same time the glandular enlargement appeared and he developed fever. A tiny white center appeared in the lesion, but on opening this no pus was obtained. The ulcer gradually developed with no inclination to heal.

While under observation three estimations of the leucocytes were made with counts 11400, 8000 and 7800, respectively. At the time of the first count there was a relative lymphocytosis but subsequent counts showed a normal differential count. The hemoglobin was 90 per cent. The urine showed a distinct cloud of albumin but was otherwise normal. The blood chemistry was normal and the blood Wassermann test negative. Fractional gastric analysis showed a complete achlorhydria which accounted for his digestive disturbances but was thought to bear no relation to his acute infection. A specimen of blood submitted to the laboratory of the Virginia State Board of Health showed agglutination of the *B. Tularensis* in dilutions up to 1:320. This was checked by the Hygienic Laboratory at Washington, with identical findings, thus confirming the diagnosis. He was advised as to rest, etc., and in a letter dated Feb. 5th, he stated that he was much better and had practically no temperature.

Tularemia is essentially a disease of rodents and was first described as such by McCoy¹ in 1911, his observations being made

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on ground squirrels of California. In the same year he and Chapin² discovered the causative organism and named it *bacterium tularense*. From reports, these authors and a laboratory attendant must have contracted the disease although it was not recognized. In a paper published in 1921 by Francis,³ he gave the disease the name *tularemia*. The California ground squirrels, the snow shoe rabbit and the cotton tail rabbit are commonly infected and in these animals the disease is very fatal, only one recovery having taken place in experimental infections in rabbits.⁴ Human beings become infected accidentally by the bite of an insect or tick carrying the infection or by coming in contact with the tissues of an infected animal. Practically every laboratory worker who has dissected these diseased animals has become infected, but all of the cases occurring in this section of the country outside of laboratories have been contracted while dressing the ordinary cotton tail rabbit. Shelton⁵ reported the first case from Virginia in 1925, and later a second was studied by Brunk.⁴ Since the case cited above was seen, a colleague has had a fourth under observation. Francis⁴ recorded notes of 49 cases in 1925, fourteen of which occurred in laboratory workers. It is interesting to note that the disease has been entirely worked out by men in this country, the only foreign cases occurring in the Lister Institute in London, where three individuals became infected while experimenting with cultures of the organism supplied them by the Hygienic Laboratory at Washington.⁶

The organism is a small, nonmotile, gram negative bacillus which is cultured with some difficulty. In laboratory animals the pathology is most manifest in the liver and spleen, consisting grossly of small areas of necrosis greyish white in color.

The incubation period varies from two to five days. Two clinical types of the disease are seen in man. Among laboratory workers it often manifests itself as a continuous fever of the typhoid type with no obvious primary lesion. One case reported by Verbryke⁷ had a picture simulating cholangitis. Three cases of conjunctivitis due to *b. tularense* were reported by three ophthalmic surgeons in Cincinnati in 1914,⁸ 1915,⁹ and 1917,¹⁰ respectively. In the more usual type the fever is intermittent and a primary lesion is demon-

strable, usually on the hands. It begins as a small, inflamed area which breaks down in the center with the formation of a punched out type of ulcer. Coincident with the local infection the neighboring glands enlarge, and in 50 per cent. of the cases suppuration occurs, but there is no general glandular enlargement. At the same time constitutional symptoms develop. These consist of fever, prostration, headache and at times chills. In some cases these symptoms may be very mild. The average duration of the disease is about four weeks, but following subsidence of the fever the patient may be listless for several weeks or months.

The diagnosis is made from the history, the physical examination and the agglutination test. This is exactly comparable to the Widal test in typhoid fever and is diagnostic. The agglutinins appear after the first week of illness and remain in the blood for a long period of time after recovery so that the diagnosis of an obscure fever may be made sometime after the clinical symptoms disappear.⁴ A slight leucocytosis may be found during the febrile period, but no positive blood cultures have been reported.

The disease is self limited and very rarely fatal. The treatment is entirely supportive in character, consisting of rest during the febrile period, an abundance of nourishing food and plenty of fluids. Should the glands suppurate they should be incised. It is important to protect any open lesions by thick dressings so that intimates may not become infected. So far no curative or protective agents in the way of serums or vaccines have been elaborated.

REFERENCES

1. McCoy, G. W.: A Plague-Like Disease of Rodents. Pub. Health Bull. 43, U. S. Public Health and Marine Service, Washington, 1911, page 53.
2. McCoy, G. W., and Chapin, C. W.: Further Observation on a Plague-Like Disease of Rodents with a Preliminary Note on the Causative Agent, *Bacterium Tularense*. Jour. Infect. Dis., 10:61, 1912.
3. Francis, Edward: The Occurrence of *Tularemia* in Nature as a Disease of Man. Pub. Health Rep., 56, 1781, 1921.
4. Francis, Edward: *Tularemia*. J. A. M. A., 84, 1243, 1925.
5. Shelton, T. S.: *Tularemia*. J. A. M. A., 84: 1019, 1925.
6. Ledingham, J. C. G., and Fraser, F. R.: *Tularemia* in Man from Laboratory Infection. Quart. J. Med., 17, 868, 1923-1924.
7. Verbryke, J. R.: *Tularemia* with Report of a Fatal Case Simulating Cholangitis, with Postmortem

Report. J. A. M. A., 82:1577, 1924.

8. Vail, D. T.: *Bacillus Tularensis* Infection of the Eye. *Ophth. Rec.*, 23:487, 1914.

9. Sattler, Robert: *Bacillus Tularensis* Conjunctivitis. *Arch. Ophth.*, 44:265, 1915.

10. Lamb, F. W.: *Conjunctivitis Tularensis*, with Report of a Case. *Ophth. Rec.*, 26:221, 1917.

DISCUSSION

Dr. W. R. Wallace, Chester, S. C.:

I think that Dr. Davis's paper is very timely. At the December meeting of our South Carolina State Board of Health, of which I am a member, our State Health Officer, Dr. Hayne, had just returned from Montreal. At that meeting the attention of the state health officers had been called to tularemia. It had been reported, especially by western men, that tularemia was rapidly spreading toward the east. Our attention had already been called to it by Dr. Gage, of Charlotte. He had sent a reprint around, and we were all on the lookout for it. I am certain that this past winter there have been four cases of tularemia in my county, Chester. Of course, these cases were not worked out as thoroughly as Dr. Davis did his. We should all be grateful to him for the thorough way in which he has covered the subject. Certainly all general practitioners should be on the lookout for tularemia. It is a disease spread by the cottontail rabbit, and is a disease more common in the country. Of the two cases in the city of Chester, one was in a mill man who went hunting on Thanksgiving Day. His finger was injured by the bone of a rabbit. His wife already had a cut on her finger, or cut it that day—not by the bone, however—and she also developed this typical pain and had the ulcer that the doctor has shown. Both developed fever and enlargement of the glands, which ran along for about six weeks. When these patients were first seen they were diagnosed as influenza, because there was an epidemic of influenza at that time. I did not see the cases for some time afterwards. Having heard Dr. Hayne speak about tularemia, and having seen Dr. Gage's reprint, I felt sure those patients had tularemia.

I note the doctor recommends the incision of the glands that suppurate. My plan has been to leave those glands alone, for of course many will be absorbed, and it will take a long time to heal after incision.

I should also like to ask if the spleen and liver condition in the rabbits has something comparable to it in the human who has the disease. Our idea has been that the lymphatic glands and the ulcer are the main thing to be considered. Our patients in Chester County had a long drawn out illness, and suffered considerably with the glands along arms and in axilla on the affected side.

Dr. T. A. Hathcock, Norwood, N. C.:

This paper is of a great deal of interest to me, and is one of the reasons why I came to this convention. Some time ago I read an article in a medical journal about this disease. Late in the fall a mill operative came to me with both hands covered with an eruption, with pouted out ulcers up to the wrists. He had some enlargement of the lymphatics and some fever. He said positively he was poisoned with poison oak or poison ivy—*Rhus toxicodendron* or something of the sort. I thought it was not quite typical, but put him on local treatment, and covered up his hands with ointment. He could not work for two weeks. I gave him freely Basham's mixture, and the eruption healed up nicely. He came back late in January with ulcers. He said he had dressed a rabbit two nights before, and somehow he had gotten the idea that the rabbit had poisoned him. I had been thinking of it, too, and there is no question in my mind now that we were dealing with tularemia.

Dr. Douglas P. Murphy, Rutherfordton:

This subject is one that is peculiarly interesting. I should like to ask Dr. Davis if a diagnosis can be made from the primary sore prior to the time when the Widal test, or the test he compares to the Widal, is positive or negative, or whether we shall have to wait for that period of time to elapse, after the patient comes to us, before the blood shows a positive reaction—in other words, whether there is a dark field test, or something by which we can make the diagnosis earlier in the condition.

Dr. Davis, closing:

In the paper by Francis, to which I referred, it is stated that several cases of tularemia have been contracted around Washington among the market men, and that one man working in the market there went

to his doctor and said he wanted to be treated for rabbit fever. It seems to be pretty well recognized among the market men that they can contract fever from rabbits. I made a survey of the markets around Richmond, and, while I was unable to get the men to talk freely, I found no indications of the disease.

Recently I talked to a physician who came back from a New York hospital. They had a man there for four weeks with fever. A nurse had a lesion on her finger, and developed fever. The authorities became suspicious, and went back and tested out the patient. They had been treating him for four weeks for typhoid, but he really had tularemia. I mentioned in the paper that it is important to protect these open lesions, to prevent intimates from being infected.

As to suppurating glands, I did not mean that those suspicious should be incised, but those with a pus pocket, and tending to point, should be incised, and should be well protected.

In regard to the blood test, it becomes positive in the first week of the illness. If the lesion is scraped and the material obtained is injected into a guinea pig, the diagnosis may be made about the end of the first week from the guinea pig. It takes several days for the disease to develop, so that you can make the diagnosis from the blood test about as soon. You may be suspicious of it, but I know of no way to positively make the diagnosis until the agglutinins appear or you have produced the disease in a guinea pig.

OBSTETRIC ANALGESIA BY MEANS OF MORPHINE-MAGNESIUM SULPHATE AND RECTAL ETHER*

G. BENTLEY BYRD, M.D., Norfolk

There appeared in the October, 1923, issue of the American Journal of Obstetrics and Gynecology, an article, by Dr. James Gwathmey and associates, dealing with the relief from pain of childbirth by synergistic methods. The practicability of the method so appealed to me that I wrote Dr. Gwathmey for more details and since then we have been using it in an increasing number of our private cases.

For several years we have used nitrous-oxide-oxygen extensively in our obstetrical work and the results were and are now most gratifying. Nitrous-oxide-oxygen analgesia in obstetrics is safe and it will relieve pain, but we realize that it has and will have always two disadvantages that tend to prevent its universal use in obstetrics, namely: the cost of the "gas," and the absolute need of an anesthetist familiar with its use, to administer it from the time the patient complains seriously of pain until the delivery is complete. So, it was not because of the failure of nitrous-oxide-oxygen to produce the de-

sired obstetrical analgesia that caused us to give this new method a thorough trial. In advocating synergistic analgesia, I do not wish to create the impression that it is faultless, or that it will give complete analgesia in 100% of cases, for that technique or anesthetic agent has not been discovered where-with such success is possible, but I do believe this is the safest and most promising procedure yet evolved that is capable of giving to the masses safe and yet comparatively painless labors.

The following is a brief statement that about covers the technique for the administration of the combined rectal and hypodermic analgesia: The patient is first given a cleansing s.s. enema, after which is injected deep into a deltoid or a muscle of the thigh, morphine sulphate grain $1/6$ and 2 c.c. of 50% magnesium sulphate, and if there is little or no relief from pain within fifteen to thirty minutes, a second hypodermic of the magnesium sulphate is given, this time without the morphia. A retention enema, containing ether $2\frac{1}{2}$ ounces, quinine hydrobromide grains 20, alcohol (95%) 2 to 3 drams

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

and sweet oil (or olive oil) q.s. 4 ounces, is now given. To facilitate the administration of this enema, the patient is placed on her left side in the Sims' position and a soft rubber catheter is passed into the rectum beyond the presenting part, and the mixture allowed to run in slowly by gravity or with the aid of a large syringe. At least fifteen minutes should be consumed in making the instillation. Should the patient have a pain during the administration of the enema, a little pressure about the anus will usually prevent its expulsion. After she has retained the fluid for about five minutes, there is small chance of the fluid's return. It is essential to explain to the patient before beginning the administration of the enema that she will be relieved of a great deal if not all of her pain if she retains the fluid. This practically always secures for you her hearty co-operation at once. It is considered inadvisable to repeat the morphia, but as many as four hypodermics of the magnesium sulphate may be given during the course of a protracted labor. The rectal injection may be repeated at four hour intervals if conditions require it.

At first, I admit, we were somewhat skeptical, not that ether by rectum would not relieve pain, but that the administration of ether by bowel, in a more or less empirical manner, might prove disastrous. Therefore, we contented ourselves for a while by giving 2 c.c. of 50% magnesium sulphate combined with morphine grains 1/6, intra-muscularly, supplementing this with inhalation anesthesia when the pains required it (usually at the beginning of the second stage).

Later on, we began to administer the ether-alcohol-quinine enema, but at first varying the ether content from one and a half ounces to two and a half ounces, according to the size of the patient or the stage of labor. We have never given the ether by bowel after the patient has progressed to the second stage of labor. The time of administration has been governed by the recommendations of Gwathmey, namely, pains every three to five minutes with about two fingers' dilatation in the primipara and a little earlier in the multipara. During the expulsive stage most of our patients have been given inhalations of nitrous-oxide-oxygen or ether. This can be done with perfect safety, but I would caution you, that it requires a much smaller amount of

anesthetic by inhalation, where the patient has been given rectal ether previously.

A few words concerning the subjective and objective symptoms of the patient following the instillation of the analgesia mixture would seem in order. Occasionally the patient will complain of a slight burning about the anus and perineum, which usually passes off in approximately five minutes. When she does complain of this it is well to apply a little sterile vaseline about the anus. If there has been no leaking of the mixture about the catheter the burning will be negligible. Most patients will tell you that they taste the ether within three to five minutes after administration. Nausea is noted occasionally, but no more frequently than is usually seen in women who are in labor. Within five to fifteen minutes the face will become slightly flushed, the rate of the pulse will be slowed a little, with the force somewhat increased. There seems to be no effect upon the blood pressure. Occasionally there are a few minutes when the patient is excited, during which time she may sing, laugh or weep, but this passes off quickly and she sinks into a very light sleep, from which she can be aroused by speaking to her in an ordinary tone of voice, and from which she is disturbed practically always when the contraction of the uterus takes place. The length of time for this analgesia to last is usually from three to four hours. During that time she is capable of answering questions in an intelligent manner and will take nourishment if offered to her, but if left alone in a quiet room with shades drawn, she will usually remain quiet and still. Patients who are in private rooms seem to get better results than those who are in a ward. This is probably due to the amount of noise and commotion that is unavoidable where there are several patients in the same room.

To date we have had approximately two hundred cases to receive this type of analgesia. I have been unable to detect any damage done either to mother or baby; the labors have been no longer than is usual, and although we have not actually checked up this point, it appears that the second stage is shortened. There have been no post partum hemorrhages. No effort has been made to select the type of patient for this method of analgesia. It has been used by us in private room and ward patients, as well as those de-

livered in the home and in practically every case the woman seems to have realized and to

have appreciated the relief of much of the pain that is usually attendant on childbirth.

DISCUSSION OF PAPERS OF DRS. PROCTER, RUCKER BYRD*

Dr. J. M. Templeton, Carey, N. C.:

I should simply be uttering a platitude to say that my friend Procter has given us a most admirable and instructive paper on contracted pelves this afternoon. While he was reading it the thought came to me that if the physicians of ancient Rome had had more access to knowledge of this kind, Julius Caesar would have been born *per viam naturalis*, and our profession would have been deprived of the name of one of the most important major operations in medicine. These young men are studying more in detail the measurements of the pelvis than we did, and the importance of this study is becoming more and more widely known. I believe the time is coming when every primipara, as Dr. Procter recommended, and perhaps every case of obstetrics will be measured before labor comes on, and that harvest of lacerations and tears that so often follows the incompetent physician will be swept away, and the gynecologist will no longer reap the fruits of our ignorance and inefficiency as obstetricians.

Dr. R. T. Ferguson, Charlotte:

As one of the gynecologists that reap some of the fruits of the obstetricians, I see a great many cases of cervicitis and endocervicitis, and I believe that many of these cases lead finally to cancer. I want to plead that these cases have the very best of care, and I believe if we give it a great many women would be saved from eventual death by cancer.

Dr. Oren Moore, Charlotte:

I was asked by Dr. Procter to discuss his paper, and I came prepared to discuss it unfavorably, if possible. Gynecologists and obstetricians are envious of each other, but I find that both his paper and Dr. Rucker's can only be discussed by reiterating what they say, because both are so soundly founded on the bedrock that we can only

emphasize what they say.

As to the paper on rectal analgesia, it occurs to me that every eight or ten years we go through a wave of enthusiasm for preventing labor pains. Some new procedure is devised, but eventually we go back to the old method of using chloroform, since most babies are born into the hands of general practitioners, and since that method is the best for general use. I have not been able to determine at which time to give rectal anesthesia. Either the patient is asleep when the baby is born, or is awake before the baby arrives, and I have to resort to the inhalation anesthesia. I believe the good results are from the use of morphia. After all, however, it is a very laudable attempt to do away with the curse of childbirth.

Dr. A. Power Jones, Jefferson Hospital, Roanoke:

I am not an obstetrician, and I know nothing about the measurements of the pelvis. I simply wish to mention a case which I saw in consultation a short time ago. The obstetrician, who himself had not been called previously, discovered the coccyx to be anchored at right angles anteriorly, and ankylosed. The head was firmly blocked. I had never seen such a thing before. The obvious thing to do was to get the coccyx out of the way, which was done under deep surgical anesthesia, and the child was then delivered.

I should like to ask Dr. Byrd if he has tried sacral anesthesia.

Dr. Procter, closing:

There is only one word I should like to say, and that is to sound a warning against too frequent cesarean section. I think our experience shows very conclusively that lesser contracted pelves do not call for cesarean section except in the exceptional case. I cited a number of cases here. We had one stillbirth in all of the contracted pelves, and since that time that woman has borne an eight-pound baby without assistance. I think

*Other papers in this group published in issue for March and April.

most of the cesarean sections are done upon a functional hold-up, and not upon absolute indications for a cesarean.

Dr. Rucker, closing:

I should like to show three slides in discussing Dr. Byrd's paper. Dr. Asa B. Davis, in his presidential address before the American Association of Obstetricians, said of this rectal anesthesia that it is the greatest advance in the last fifty years in obstetrics. Of course, the first question that comes up is the effect of the anesthesia upon the labor pains. I have three histograms here which throw some light upon this question.

(Showed first slide.) This is marked off in minutes. This slide shows the usual effect. First the magnesium sulphate was given intramuscularly, and then the ether—oil—quinine—alcohol was given per rectum. There was a little slowing of the uterine contractions just after the mixture is put into the bowel, but after ten or fifteen minutes the normal rhythm is restored.

(Next slide.) The second slide shows an unusual effect. Ten grains of quinine were used in the mixture, as Gwathmey first recommended. There was very little change in the height of the uterine contractions for about forty-five minutes, and then there was a marked increase in the force of the contractions for an hour. Then I tried leaving out the quinine from the mixture.

(Slide three.) In this the ether-oil-alcohol was used without the quinine, and there was almost complete cessation of pain for a considerable period. But when quinine is put in the mixture there was no diminution of the uterine contractions. The mixture that Gwathmey recommends is a nice combination of the anesthetic properties of the ether and the oxytocic qualities of the quinine, so the patient is relieved of her pains without stopping the contractions.

Dr. Byrd, closing:

Dr. Moore said we all have to revert to chloroform, but I do not use chloroform in my obstetrical work, because I am afraid of it, not only for its immediate effects, but because of the after effects which we sometimes see reported. Now, as to the question of women in labor not needing relief of pain, or that most of the work is done by the general

practitioner, the giving of ether by bowel is a method that can be used by the general practitioner. It does not require any particular technic, and does not require any equipment except as ordinary catheter and funnel and the things you have in your obstetrical bag. It can be done very easily. In a primipara, if there is two fingers' dilatation of the cervix, with pain every three to five minutes, you can use it.

I reckon I have, every year, twenty or twenty-five patients who come in to town and stay for two or three weeks prior to labor, with no thought in the world except that they will be relieved of the pain of labor. Patients are demanding it, and I think they ought to have it.

The morphine combines with the magnesium sulphate and helps its action. The magnesium sulphate combined with morphine gr. 1/6 gives you as much relief as you get from morphine gr. 1/4 without it. It is the combination that helps.

Dr. Jones asked about sacral anesthesia. I have tried it. It works all right if you know how to time its administration. Once in a while I would inject it at just the right time, but often could not time it. Most of the women receiving the ether enema do get some inhalation anesthesia when the head is on the perineum.

EAT IT OR LEAVE IT, GOOD POLICY WITH FINICKY CHILDREN

She may have thought of him as a finicky child; she may even have blamed herself for having "spoiled" him. However, she explained his food refusal to herself, she was a wise mother to set out at once to break it up. The child who is allowed to leave his food on his plate a few times soon knows he has the upper hand. In addition to being naughty at the table, he asserts his right to rule whenever there is a difference between his desire and that of his parents. More than that, one wholesome feed after another is left off, and in time he begins to show evidences of a malnourished condition because he is choosing and getting too many sweets and too few vegetables, fruits, eggs and but little milk.

Parents who have finicky children might well begin by turning an eagle eye on their own food habits to see if they are, themselves, setting a good example. It might not be amiss to record table conversation verbatim and to note to what extent food matters, both as to choice and condition of food, are discussed before the children. After directing such an investigation toward themselves, parents should study their children's food habits and temperaments and then refer to the abundance of recent literature on child training which gives concrete suggestions for solving all types of behavior problems.—Press Service, U. S. Department of Agriculture.

THE ROENTGEN RAY IN THE DIAGNOSIS OF DISEASES OF THE GALL BLADDER*

FRED M. HODGES, M.D., Richmond

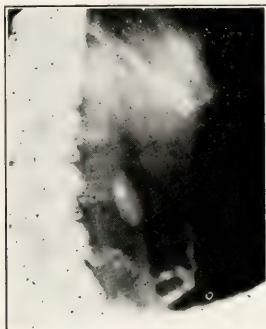
Until recently the use of the roentgen ray in the diagnosis of diseases of the gall bladder was limited almost entirely to the demonstration of a certain percentage of stones (probably about 30 per cent) and the demonstration of adhesions about the gall bladder. Occasionally an enlarged gall bladder could be made out and at times the effects of pressure by an enlarged gall bladder on the stomach or duodenum gave definite information. In eliminating ulcer of the stomach or duodenum the roentgen ray was probably of greatest value in the diagnosis of gall bladder disease.



Case 1. Fig. 1. A normal gall-bladder after the dye test.

These findings are still of definite value, but within the last two years the new Graham dye test has given us an extremely valuable and unusually accurate method of study of the gall bladder. In February, 1924, Drs. Graham, Cole and Copher of St. Louis, in an article in the A. M. A. entitled "A Preliminary Report on the Roentgenographic Examination of the Gall Bladder, a New Method Utilizing the Intravenous Injection of Tetrabromphenolphthalein Sodium Salt," describes a method which shows the gall bladder on the roentgenogram almost as clearly as the barium meal shows the stomach. Graham began this work with the theory that if he

could obtain a substance relatively non-toxic and soluble, containing a metal or atoms of iodine or bromine which could be carried to the gall bladder in sufficient concentration, this material in the gall bladder would make it opaque to the roentgen ray. Necessarily the substance would have to be excreted by the liver and carried to the gall bladder in the bile. Using the knowledge that the gall bladder concentrates its bile, he reasoned that a certain time would have to elapse before a shadow of maximal density would occur. He also concluded that a normal gall bladder would show the densest shadow, and that



Case 1. Fig. 2. The same case one hour after fatty food, showing an increase in the density and marked reduction in the size of the gall bladder.

if the liver were too badly diseased to excrete the material, or the cystic duct were blocked, or the function of the gall bladder seriously impaired, no shadow would be produced. During their investigations they used a great many compounds which were the derivatives of the phenolphthalein and phthalein groups, and finally recommended tetrabromphenolphthalein.

In January, 1925, Whitaker and Milliken recommended the use of sodium tetraiodophenolphthalein, since this salt is no more toxic and is about twice as opaque to the roentgen ray as the tetrabrom salt.

Either the tetraiodo- or tetrabrom- salt can be given orally in enteric coated capsules

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

or intravenously. With either method food should not be taken after the administration of the salt, since if food is in the duodenum bile is poured into the intestine, and even in normal gall bladders there might not be enough concentration of the salt in the gall bladder to show a shadow on the roentgenogram.

When the drug is given intravenously, a faint gall bladder shadow can usually be seen from about the fourth to the seventh hour afterwards. The shadow of the normal gall bladder as a rule increases in density until about the twenty-fourth hour, but at this time it is about half the normal size. From this time until the thirty-sixth to forty-eighth hour the shadow gradually decreases in size until it disappears entirely.

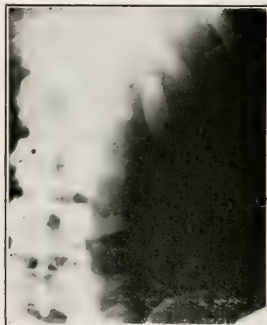


Case. 2. Fig. 1. Gall bladder less dense than normal.

In cholecystography we have not only an unusually accurate method for the study of disease of the gall bladder, but also for the study of gall bladder function. The size, contour, and position of the gall bladder shadow are plainly visible. Cholesterol or negative gall stones show as less dense areas within the gall bladder shadow. Adhesions distort or pull the gall bladder to one side. Of more value probably than any of these are the findings in the cases where no gall bladder shadow, or a very faint shadow, shows. Where no shadow at all shows, especially by the intravenous method, usually there is an obstruction of the cystic duct or marked disease of the walls of the gall bladder. Graham has shown that usually in cholecystitis, the interstitial tissues and lymphatics of the gall bladder, and not the mucosa, are diseased, and that this is prob-

ably due to the fact that gall bladder inflammations are so frequently associated with a lymphangitis secondary to a hepatitis. When the lymphatics of the gall bladder wall are diseased the organ loses its power of concentrating the bile and in the same way the power to concentrate the dye, and gives a dense shadow. A very serious disturbance of the liver function might also cause an insufficient amount of the dye to be excreted to cast a shadow of the gall bladder, but in all probability in such instances there would be some clinical evidence of liver disease. When using the oral method a marked disturbance of intestinal digestion and absorption might prevent enough of the dye being carried to the liver to cast a shadow of the gall bladder.

Sosman, using cholecystography, has made



Case 2. Fig. 2. The same case one hour after fatty food, showing practically no change in the size or density of the shadow. At operation a moderately infected gall-bladder was found.

a rather extensive study of the function of the gall bladder. After using many drugs and foods by mouth and duodenal tube, he found that fats by mouth cause the quickest and by far the most marked effect on the gall bladder. Within from twenty minutes to one hour and a half after the ingestion of fats, the normal gall bladder will contract markedly and practically empty itself of all the dye. He was unable to satisfactorily explain this phenomenon, since the gall bladder gave the same quick response to the ingestion of fats in a patient who had a gastroenterostomy and closed pylorus. He found that psychic tests, sight, smell, and taste of food had no effect on the gall bladder. Carbohydrates had no effect; proteins and peptones caused a moderate decrease in the size

of the shadow. Olive oil and castor oil, by mouth; atropin, physostigmin, pituitrin, adrenalin, by hypodermic injection; hydrochloric acid, nitroglycerin, meat extracts, ginger, sugar, starch, glucose, and alcohol, by mouth had no appreciable effect on the size or density of the gall bladder shadow. Mechanical factors, forced respiration, heat and cold, stimulation of the ampulla of Vater by food, etc., had practically no effect. Magnesium sulphate by duodenal tube had only a moderate effect on the gall bladder.

Sosman found that an intact sphincter of Oddi was necessary to obtain a normal cholecystogram. Sodium bicarbonate by mouth caused a slight increase in the size of the gall bladder shadow. He suggests that this apparent relaxation of the gall bladder may be the reason why many gall bladder patients experience some relief after the ingestion of alkalis. We know that fats cause a marked contraction of the gall bladder, and he also suggests this as a possible reason why many patients with cholelithiasis avoid fats.



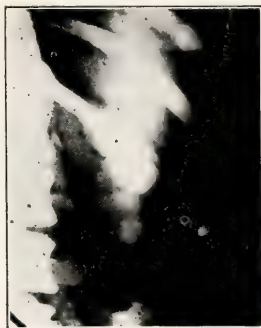
Case 3. Fig. 1. Gall-bladder shadow with less dense areas throughout, due to non-opaque gall stone. A large number were found at operation.

In diseased gall bladders, the concentration of the dye and the contraction of the gall bladder depend upon the amount of disease present. Where there is marked disease, practically no concentration occurs. This frequently enables us to determine slight variations from the normal, and it is hoped that by making earlier diagnoses, diseased gall bladders can be removed, giving complete relief from symptoms before there has been a wide-spread involvement of the lymphatics, liver, and pancreas.

Cholecystography has become a routine procedure in all the large clinics throughout the country, and all of them report the



Case 4. Fig. 1. Note in this case the ringlike shadows which were due to gall stones. After giving the dye, no gall-bladder shadow could be seen.



Case 5. Fig. Gall bladder showing a constriction of the median portion by adhesions. This was found at operation.
Volume 88

method as accurate in percentages varying from 90 to 96. The average is about 93. This is a remarkable record when compared with previous statistics. In our own work the diagnosis has proven correct in 91 per cent. Where the diagnosis is doubtful after the oral method, an intravenous injection should be done; since only in this way can we be certain that the dye has reached the liver.

SUMMARY

We believe that where this test is combined with the usual gastro-intestinal barium meal examination, and in certain instances

an examination of the bile obtained by duodenal tube, a far greater percentage of correct diagnoses in gastro-intestinal diseases will be made than has been possible in the past.

DISCUSSION

Dr. A. L. Gray, Richmond:

This most excellent paper of Dr. Hodges brings out the first real, sure-enough proof of genuine work that can be now done in the examination of gall bladders. For years and years we have had cases referred to us for examination for gall stones, and it had become so monotonous to me to report, "No gall stones found; outline of gall bladder not visible," that really I felt ashamed of myself when I have had to make such a report. Dr. Hodges that that about 30 per cent of gall stones show. I think his percentage is entirely too high. Twenty per cent., or between 20 and 30 per cent., would be more like it. In our efforts to determine the condition of gall bladders we have resorted to all manner of indirect methods—examination of the gastro-intestinal tract, search for adhesions (some of which he has shown you very prettily), and, especially, deformities produced or supposedly produced by indentation of the gall bladder into the pyloric end of the stomach or duodenal bulb. Dr. Hodges showed

you one slide of what proved to be a diseased gall bladder, in which there was this indentation, but in another slide there was a similar indentation, and the gall bladder was some three or four inches away from it. In another picture there was a dent in the pyloric end of the stomach, not in the duodenal bulb; the gall bladder was well up above that. We have had in our experience cases exactly similar to these, with an indentation, which, according to our former interpretation, would mean unquestionably a distended and pathological gall bladder. This indentation is not, as these pictures of Dr. Hodges prove, and as we have proven ourselves, by any means pathonomic.

Dr. James W. Hunter, jr., Norfolk:

I want to say that I think this is about the ablest resume of the subject that I have heard or seen or read.

Dr. Hodges, closing:

I believe that these gastro-intestinal cases, with the exception of ulcers, should have the dye test made and that the bile should also be examined for pus; since in a certain percentage of cases additional evidence of gall bladder disease will be obtained. If these two examinations are made a correct diagnosis will be made in many instances where this has not been possible in the past.

DENTAL CONDITIONS AND THE HEALTH OF CHILDREN

M. B. MASSEY, D.D.S., Greenville, N. C.

For forty odd years we have been believing in the fermentative theory of the etiology of dental decay, and, thus far it seems that it has failed to reduce the incidence of dental decay among the civilized people of the world.

The forty-five or fifty odd thousand dental practitioners are working with all their might, studying and endeavoring to practice all the wonderful advances and accomplishments which have been made along surgical and mechanical lines, and yet, it seems that dental decay with all its evils is more prevalent than ever.

There was a time when most all dentists appeared by their exclusive interest in reparative dentistry to believe entirely in the theory that good teeth, or teeth capable of giving thorough mastication to food, were not only fundamentally necessary but actually the only essential to good health, apparently overlooking entirely that health or good nutrition is capable of and does originally determine the development of normal teeth.

Consequently this erroneous estimate of the situation has resulted in the highly developed inlay, crown and bridge-work, and dental surgery, all of which is strictly reparative,

both in its relation to the individual for whom the work is done and for its results so far as the next generation is concerned.

The nearest to preventive dentistry we have been able to get thus far is as it is applied to the reparative work performed, making the reparation as permanent as possible, but which does not mean that we are failing to appreciate any of these at best only, and in a slight degree prevent further complications. In medicine prevention means to avoid the occurrence of a disease, not to cure it, even if by its cure the individual is left as sound as if he had not endured the disease, consequently it seems logical to assert the necessity for other measures than those provided by the art of dentistry to provide the civilized races with sound teeth or to develop real preventive dentistry.

The idea of a systemic cause for decay of teeth is quite old, and some of the earliest conceptions of the cause of dental disease are along this line. Hippocrates taught that stagnation of depraved juices in the jaws and teeth aggravated by an accumulation of food debris was the active cause. Galen taught that tooth diseases were the result of vicious humors of the blood produced by disturbances of nutrition. It is only for a comparatively short while that any really serious thought and credence has been given to the theory that the general health or systemic condition may play a very important part in the development of the teeth. It is quite probable that the present prevalence of caries may not be due entirely to diet, but to an aggravation of several complex conditions, all tending towards a lessened resistance to constitutional disorders. This is all of course of complex origin.

It should not be so difficult to believe in the theory of systemic influence, because the teeth are developed and maintained as is any organ of the body, consequently, they naturally partake of the health or lack of health of the general system. It has been generally conceded that the condition of the teeth of an individual is responsible for, or contributory in a large measure to, the general health, whether this be by aiding mastication or by eliminating foci of infection. This is undoubtedly true both of adults and children. At most every examination you will find that the worst teeth are found among the poorly

nourished, and the best among those exceptionally fit.

There can be no doubt that dental troubles affect the health and development of children, either as cavities causing pain, preventing proper mastication, or by nervous reflexes or focal infection retarding its development and exerting a direct influence on its physical welfare, mental development, and school progress. The repair or extraction of troublesome teeth will undoubtedly greatly assist in improving the child's physical and mental condition.

The condition of normal development and uniform enamel formation appears to show that the lack of certain factors during the prenatal period and early childhood involves serious consequences. Every day we hear something about vitamins, and it seems that they are essential for normal development, and that the younger the individual the more of the vitamins are needed. It is very reasonable to believe that the pregnant and nursing mother should store up an extra supply of the fat-soluble factors, for instance, as it enables her to provide a high concentration of this factor without depending upon an external supply. We cannot over-estimate the importance of this factor, because a deficiency of this vitamin is more serious and far-reaching, occurring in early life, particularly during the period when the child is entirely dependent upon its mother, and on account of the rapid growth which takes place before birth, and during the first two years of post natal life. The health of the expectant mother, especially at about the sixteenth to the twentieth week, appears to be of the greatest importance in terms of nutrition, particularly as it may relate to calcium metabolism.

It has been thought that lack of breast feeding is responsible for the failure of good tooth development, but unless the mother's milk is free from harmful ingredients, and the mother herself in good health, the result of breast feeding may be harmful rather than beneficial. In this lack of health of the mother, carious and abscessed teeth naturally play an important part. Good breast milk free from any toxins produced in the mother's system is undoubtedly a prime factor in determining the general health and development of the child.

The proportion of normally formed teeth at eruption, which later succumb to caries, is extremely small. Teeth erupting with even minute defects readily and rapidly progress to extensive decay, except in rare instances, when perhaps on account of some reverse systemic condition the process is entirely stopped.

Dental caries is said to be a childhood disease, and it certainly is more prevalent during this period; but it is probable that this may be due to the fact that teeth erupting with structural defects of necessity succumb to decay within relatively a few years, depending on the extent of the defect, and of the general resistance of the system. This usually results in the loss through caries or extraction of practically all the weak members, with the exception possibly of those where decay is arrested. The teeth, therefore, which last until adult life are those which were originally normal or whose defects have been remedied by fillings. Nothing more nor less than the survival of the fittest which really means the survival of teeth normally developed during the embryonic period and the first two years of childhood.

Take for consideration some of the following irregularities in and around the mouth and face as they relate to the health and development of the child.

(1) Let's mention "abnormal development of the face and some irregularities of the teeth."

How many faces and mouths do you see that resemble even to the slightest degree an Apollo? In most every mouth you examine you will find some irregularity. Consider the handicap produced by abnormal proportions of the face and head giving us such typical appearances as the idiotic, insane, or criminal types. An open mouth with the teeth of a narrow, protruding upper jaw, and with a receding chin gives an appearance of weakness to the face. The narrow V-shaped upper jaw with a high vault may cause a narrow nose and the child is likely to have a dull, listless expression. Observe a child with a narrow jaw and face, and you will find that he opens his mouth just as soon as he runs. The constricted nasal passages cannot accommodate the passing of a sufficient amount of air to supply the blood with the additional oxygen required by the increased physical

activity. He has to breathe through the mouth allowing the air to enter the lungs unfiltered, unmoistened and cold. This, however, is not all the damage done. If the mouth is constantly open the muscular balance of the mouth is overthrown. Normally the teeth receive about as much pressure from the muscles of the cheek as from the muscles of the tongue, but with the mouth open the tongue exerts no pressure, which allows the cheeks to make the bad condition worse, the upper jaw becoming still narrower, and the nose more compressed.

(2) Next let us mention focal infection caused by dental diseases: a diseased pulp in a decayed tooth, an infection at the end of a root involving the bone of the jaws, and severe cases of pyorrhea are the most frequent dental causes of focal infection. Imagine the effects of swallowed pus on the digestive system. If one were asked to take half a spoonful of decayed food and pus with every meal would he expect to remain healthy? This is exactly what happens in children suffering from dental decay and gum-boils because of broken down temporary teeth, and in the mouths of adults who have pyorrhea, sinuses from infected teeth, etc.

(3) Dental diseases as related to nose and throat diseases: Pus from the teeth when discharged into the mouth often causes infection of the crypts of the throat, the tonsils, and Eustachian tubes.

(4) The result of absorption of pus and bacteria. Some of the most common results of septic conditions in the mouth such as pyorrhea or infection at the roots of devitalized teeth is a so-called chronic toxemia which manifest itself by all kinds of vague symptoms caused by the action of the absorbed bacteria, or the poisons they form, or both, on other tissues or organs in any part of the body. Now these are just a few of the many ills that may visit the child if good dental treatment is not instituted in due time.

Of all the responsibilities resting upon the shoulders of the medical profession including any of its branches, one of the most important is to help develop sound teeth in the coming generation if we are to have healthy, happy, rosy-cheeked children who possess beautiful and useful teeth, because a mouth full of decayed teeth harboring millions of bacteria, exposed pulps which cause pain

every time hard food is crushed, and sinuses discharging pus which mixes with the food cannot possibly be associated with good health, and causes, as we have seen, a great deal of suffering. Knowing that the children will become dental cripples if they are allowed to be neglectful either from carelessness or lack

of knowledge, faulty diet or lack of hygiene, it is our duty to protect these children from these mistakes. Every child has the right to be protected from preventable diseases, and to be started off in life with a healthy body and sound mind.

THE VALUE OF RADON (RADIUM EMANATION) IN THE TREATMENT OF CANCER*

DOUGLAS P. MURPHY, M.D., Rutherfordton, N. C.

Radon or radium emanation is a gas evolved by the decomposition of the element radium. It is produced at a constant rate and in very small amounts, so small that it is very difficult to collect. For this latter reason it is necessary to have approximately one gram of radium in order to secure sufficient radon for practical purposes. To secure this emanation from the radium it requires the installation of an elaborate apparatus and the services of a physicist skilled in its management.

The emanation plant collects the radon and purifies it, and compresses it into very small capillary glass tubes. These are in turn cut into appropriate sizes and are measured by a rather delicate apparatus called an electroscope. This process requires the best part of a day, and is carried on four days of the week in order to have on hand constantly as large supply of radon as possible, since the gas decays rather rapidly.

Tumors can be treated by applying the radium or its emanation either to the surface of the growth or can be implanted in it. This latter method in selected cases is the method of choice.

To implant emanation the fine capillary glass spicules containing the radon are cut into minute sections. These are boiled to sterilize and then are ready to implant by means of a hollow needle containing a trocar which forces the spicule of the gas into the appropriate location. Implantation frequently can be done using a local anesthetic but

in other cases a general anesthetic is preferred.

If the spicule contains one millicurie of gas radiation continues uninterrupted for a period of approximately 30 days, and each spicule has a radius of activity of approximately one centimeter. At the end of this time the spicule becomes inert. It is then either sloughed out or becomes encysted but gives no further trouble.

The greatest value of emanation implantation is to be found in the treatment of tumors of the body cavities. It is also of value in the treatment of circumscribed growths of the face of large size which cannot be removed satisfactorily or in which external radiation is powerless to eradicate completely. This also applies to similar tumors in other parts of the body. It is difficult to enumerate all types of growth most suitable for emanation implantation. It is important that the cases be well selected. If this is done the benefits from this form of treatment are very gratifying, and its use has the following advantages:

1. Accuracy of application
2. Accuracy of dosage
3. Ease of retention
4. Uniformity of distribution
5. Radiation effective in all directions
6. No loss of rays due to metallic filter as when the salt of radium is used
7. Long period of activity (30 days) in which time the radon can act on cells in their state of division, at which time they are considered to be most vulnerable to radiation.

Rutherford Hospital.

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

NEUROFIBROMATA*

With Report of a Case

CARRINGTON WILLIAMS, M.D., F.A.C.S., McGuire Clinic, Richmond

Mr. Alexis Thomson, Professor of Surgery in the University of Edinburgh, published in 1900 a monograph on neuroma and neurofibromatosis which was so well done that in the twenty-five years since its publication little has been added except reports of cases. A brief review of neurofibromatosis will be given in this paper and a very unusual case will be reported.

Tumors of nerves have been reported for one hundred and fifty years or more, and Wood of Edinburgh in 1829 pointed out as the origin of most nerve tumors, the fibrous portion of the nerve trunk. Virchow¹ in his lectures published in 1863 placed the pathology of tumors of nerves on the true histologic basis. He divided the tumors into true neuromata which are made up of nerve fibrillae and ganglion cells, and false neuromata which are largely fibrous tissue. Von Recklinghausen in 1882 gave such a complete description of the condition that the multiple tumors of this nature have been known since as Von Recklinghausen's disease.

Tumors originating purely in the nervous elements have been reported, but they are of such rarity that they will be left out of this discussion. The division neuroma found so often at the end of a nerve severed during an amputation, is a mixture of nerve fibrils and fibrous tissue and will not be further considered.

The false neuroma or neurofibroma arises from the connective tissue elements of the nerve. There has been much discussion regarding the particular fibrous layer from which the tumor may grow, without any definite conclusions; it is probable that any or all may be involved.

It seems certain that heredity plays an important part. Many cases have been reported illustrating this. I have seen a mulatto family of father and two daughters all three of whom had typical multiple subcutaneous neurofibromata. Tucker² believes

that endocrine disturbances also play a part in the formation of these tumors. He has observed pituitary changes of the acromegalic type and suprarenal manifestations. Preiser and Davenport³ discuss heredity as a factor in this disease and have observed certain glandular dyscrasias. They say that the tumors in certain families tend to be malignant.

Ewing⁴ states that true medullated nerve fibers may grow in tumors from nerve trunks without any ganglionic connection. The tumors vary greatly in size. In general they are well encapsulated but may be densely adherent to surrounding structures. In the multiple tumor type the nodules are usually soft while the discrete tumors on nerve trunks are quite hard and the capsule is continuous with the nerve sheath. These tumors are often lobulated and the fibers arranged in whorls. The fibrous tissue is present usually in various stages of development, in different areas of the same tumor may be found hard dense fibers and myxomatous areas. The growth of cells may be so rapid as to appear malignant. The myxomatous areas may soften and form cysts.

According to the number, distribution and type of the tumors the disease may take a variety of forms. The most frequent type is that having multiple subcutaneous tumors, the "molluscum fibrosum" of the early writers. These nodules occur all over the body and vary greatly in number. They may be very few or they may be innumerable. Accompanying the skin manifestation there may be any of the other varieties to be described. The central nervous system may be involved to a varying extent.

Parker⁵ reported a man of 20 years who had the typical peripheral tumors and also tumors of the optic nerve and spinal cord.

Christin and Naville⁶ reported a young man who at autopsy had 31 intracranial neurofibromata and they state that only 23 such cases have been reported.

The plexiform neurofibroma occurs on one particular nerve or plexus of nerves. There

*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

may be an actual growth of the nerve fibers with multiple tumors of fibrous tissue grouped into one large mass, or the multiple tumors may occur along the nerve in its normal course.

Bruce⁷ reported a plexiform neurofibroma of large size removed from the solar plexus.

Anzinger⁸ reported a boy of 8 years who had had tumors along the nerves of the right arm since his second year. The father of this child had similar growths.

Winestine⁹ reported a man of 60 years who had multiple tumors along the nerves of the right lumbar plexus.

Valentine Mott¹ in 1854 described as "Pachydermatocele" the tumor which Virchow¹ later described as "Elephantiasis Neuromatosa." This tumor may or may not be accompanied by the skin manifestations. It may involve a whole extremity or it may grow from some localized area as the buttock or part of the face; it grows progressively larger and not infrequently becomes malignant.

Tucker² reported on elderly negro man who has such a tumor hanging from the right side of his face.

One of the mulatto women mentioned above had in addition to multiple skin nodules, a tumor the size of a watermelon hanging from the left buttock.

Longhane¹⁰ reported an Arab 25 years of age who had multiple skin nodules and a tumor which weighed 70 pounds hanging from the right loin.

Frick and Irland¹¹ had a woman 59 years of age with a large pendulous growth from the face and neck which had recently grown rapidly. This was removed and was found to be sarcoma. She also had the multiple skin tumors.

The solitary neurofibromata involving the trunks of large nerves are from a therapeutic view at least, perhaps the most interesting variety. These tumors not infrequently are accompanied by the skin nodules.

I removed from a cadaver a neurofibroma the size of a grapefruit which grew from the sacral plexus.

Caldwell¹² reported a large tumor on the ulnar nerve in a patient who had the skin nodules.

Kerr¹³ removed a tumor measuring 6 inches by 3 inches from the sciatic nerve of a man who had in addition only a few nodules

on his chest.

Linell¹⁴ found a blood filled cyst the size of an egg on the median nerve of a woman 42 years of age.

McGuire and Burden¹⁵ reported the removal of a sarcoma of the median nerve which originated in a neurofibroma; the nerve was removed with the tumor. This recurred after operation and the arm was amputated.

Davis¹⁶ removed an apparent fibroma from the sciatic nerve, the tumor recurred and was found to be sarcoma at reoperation.

The case to be reported was of considerable clinical interest as well as giving an unusual pathological specimen.

The patient was a man 21 years of age who entered the McGuire Clinic on June 1, 1925, referred by Dr. H. L. Robertson, of Charleston, W. Va. He complained of constant pain in the right thigh and knee of varying severity.

The family history and past history were unimportant.

In February, 1923, he was injured by a blow on his back in a ball game. Shortly after this he noted a tingling pain in the right knee which continued for six months, when it became very severe, particularly at night. At this time he was sent to an orthopedic surgeon who made a diagnosis of arthritis of the spine and sacro-iliac joints. This was treated by adhesive plaster support and later by a cast. For a few months he was more comfortable but with removal of the support the pain returned. He was then referred to another orthopedic surgeon who confirmed the diagnosis. The x-ray studies of the spine, pelvis, hips and femur which had been repeatedly done were negative. In April, 1925, the pain remained the same but his general physical condition was excellent. Now a marked limp had developed and there was noticeable atrophy of the muscles of the right thigh. Further x-ray study was negative as were all the usual laboratory examinations. About this time Dr. Robertson discovered a mass in the right iliac fossa palpable only on deep pressure. This manipulation increased the pain in the leg. The abdomen was explored and the mass found to be embedded in the iliac muscle. The peritoneum was then reflected from the iliac fossa but considerable bleeding was encountered and removal was

not attempted. At this stage he entered the McGuire Clinic.

The physical examination showed a well developed and well nourished young man. The right thigh was moderately atrophied and the knee jerk on this side was absent. In the right iliac fossa a mass of rather indefinite size was palpated.

X-ray study and examination of the blood and urine were again negative.

At operation, June 4, 1925, an incision was made just above the right Poupart's ligament. The peritoneum was reflected inward and the tumor exposed. It was encapsulated but adherent to the iliac muscle and was enucleated with moderate difficulty. A large nerve ran through the tumor and was divided above and below it.

Dr. S. W. Budd made the following pathological report:

"An encapsulated tumor measuring 9 by 6 by 4 cm., with segments of one large and several small nerves in the capsule of the growth. The capsule is extremely thick and fibrous and strips from the growth with some difficulty. The capsule itself is of an entirely different structure from that of the growth.

"The growth is oval in shape, somewhat irregular in outline, firm to the feel, of a mottled pinkish grey color. Microscopic examination shows a variety of microscopic pictures, depending largely from where the section is cut.

"In some zones the growth is very cellular, the cells being of a spindle-cell variety and gives the appearance of a fibro-spindle-cell sarcoma. The nuclei, however, do not show the mitotic figures and are not hyperchromatic as one would expect to find in an actively growing sarcoma. In other zones there are a few large nerve cells, some medullated and some non-medullated nerve fibers and a small amount of connective tissue stroma. In still other zones the tumor is made up almost entirely of the embryonic connective tissue.

"Diagnosis: Ganglionic neurofibroma."

The convalescence was uneventful. Following the operation the pain was relieved, but there was motor and sensory paralysis throughout the distribution of the anterior crural nerve. A recent letter from Dr. Robertson states that the patient has the same motor and sensory paralysis but has been free of pain. He is able to walk well, dance easily

and suffers practically no discomfort from his disability.

DISCUSSION

Neurofibromata appear usually in childhood and grow very slowly throughout the life of the patient. Many cases have only the subcutaneous nodules and may go through life with few or no symptoms. Pain is the most constant symptom and later in the disease weakness may be quite extreme.

The elephantine type of growth tends to grow progressively, and frequently becomes malignant. The plexiform tumors cause deformity, pain and loss of function of the part involved. The single tumors when situated on large nerve trunks may cause pain along the course of the nerve and paralysis of the muscles supplied by the nerve.

The only treatment for any variety of these tumors is surgical removal. Manifestly this is impossible in many of the multiple tumors, and in the plexiform and elephantine types it may be quite hazardous or so mutilating as to contraindicate operation. In the solitary type the tendency to malignancy indicates early surgical removal. It is rarely necessary to resort to amputation, but unless the tumor is small and very easily separated, the nerve trunk should be resected well above and below the tumor. In untreated cases of all types reasonably long life may be expected, but old age is very rare.

REFERENCES

1. Thomson, Alexis, Edinburg; 1900.
2. Tucker, B. R.; Arch. Neurol. and Psychiat.; 1924, 11, 308.
3. Presier, S. A., and Davenport, C. A.; Am. Jour. Med. Sci.; 1918, 156, 507.
4. Ewing, James, Philadelphia; 1922.
5. Parker, H. S.; Jour. Nerv. Ment. Dis.; 1922, 56, 441.
6. Christin, E., and Naville, F.; Ann. Med.; 1920, 8, 30.
7. Bruce, J. A.; Brit. Jour. Surg.; 1924, 12, 268.
8. Anzinger, F. P.; Ohio State Med. Jour.; 1919, 15, 424.
9. Winestone, F.; Jour. Cancer Res.; 1924, 8, 409.
10. Longhane, F. McG.; Lancet., 1921, 1, 1301.
11. Frick, W. J., and Irland, R. D.; Surg. Clin. of N. A.; 1923, 3, 15.
12. Caldwell, C. E.; Surg. Gynec. Obst.; 1920, 31, 242.
13. Kerr, Norman; Surg. Gynec. Obst. XVIII; January, 1914, 66.
14. Linell, E. A.; Brit. Jour. Surg.; 1922, 10, 202.
15. McGuire, E. R. and Burden, J. F.; Surg. Gynec. Obst.; 1922, 35, 453.
16. Davis, Thos. A.; Surg. Gynec. Obst.; XX; April, 1915, 495.

DISCUSSION

Dr. A. L. Gray, Richmond:

I wish to present a case which was referred to us from the out-patient department of our free dispensary at the Medical College of Virginia;—from the urological department. This was cutaneous neurofibromata. The man came into the clinic suffering with the symptoms of urinary calculus. He revealed the condition that you see there, his entire body being practically covered with those nodular masses. Just under his left arm was a large mass. Where we came in was in the diagnosis of urinary calculus. There were numerous shadows resembling calculi on both sides, and one large, irregular shadow over in the left flank. Of course, we know all these shadows could not be urinary calculi, but whether or not the mass on his left side was the large mass, showing through him, which had appeared on the skin of the left side of his abdomen, we had to determine. We had to distinguish calculus from a clump of those neurofibromata. In order to distinguish, we

did a pyelogram on him. The injection of the iodid simply confirmed the location of this mass in the pelvis of his kidney. I think this particular case is the most extensive case of cutaneous neurofibromata I have ever seen, either in case reports or in the literature.

Dr. J. G. Lyerly, Richmond:

Dr. Williams called attention to the fact that sometimes these neurofibromata attack the cranial nerves, inside the cranial cavity. When they do, the patient may show signs of intracranial pressure. Most frequently, when they do, they attack the acoustic nerve. Mushing, in his monograph on acoustic neuromata, called attention to the fact that when you have these tumors on the cranial nerves they may also appear in other parts of the body. The acoustic nerve is not always the only cranial nerves involved. Frequently we have to resort to surgery for relief. These tumors of the peripheral nerves of the body sometimes become very painful and have to be removed.

THE PRACTICAL VALUE OF ELECTRIC LIGHT IN THE TREATMENT OF INFECTIONS

The rays of the sun have been used for many years, and various special light rays have been employed to a great extent, especially in sanitarium practice, usually by enthusiasts in whose judgment neither the general practitioner nor the surgeon has had reason to place great confidence. As a result of this circumstance, one has had the feeling that any apparent benefit probably came from the element of suggestion contained in the treatment. Most of the patients treated in these institutions are neurotics who require and demand some fad, and whether the light is red or blue or ultraviolet, the result is the same.

On the other hand, the treatment of infections by means of heat is as old as medical history. There is a certain degree of heat connected with all light treatment; consequently, whatever benefit was not attributed to suggestion could easily be attributed to the heat accompanying the light.

Four years ago, when I suffered from a violent infection of my elbow, it became necessary to expose the ulnar nerve when the abscess was laid open. This gave rise to intense neuralgic pains which continued for many days without cessation, notwithstanding the use of wet and dry heat.

At the suggestion of Dr. Saurenhaus, I applied an electric light apparatus. Within an hour the pain had disappeared, not to return.

My natural skepticism regarding the effect of therapeutic measures led me to think this might be due to coincidence, and that possibly the pain might have subsided at this time had we not employed the electric light.

During the past four years, however, I had an opportunity to test this method at the Augustana

Hospital in 78 similar cases of infection of the extremities, and invariably the pain has disappeared promptly. Sixty-one of these cases were infections of the upper extremity, and 17 of the foot.

We have had equally satisfactory results in the use of the electric light in treating peritonitis following abdominal sections for the relief of suppurating conditions such as appendiceal abscesses, perforated gall-bladder, etc., also in tuberculous and gonorrhoeal joint infections, in carbuncles and furuncles.

In case of X-ray burns the light treatment causes a rapid improvement of the condition, and one of my assistants who had an opportunity of treating many patients suffering from frozen extremities, assured me that his results were much better with electric light than with any other form of treatment. George W. Crile reported that in many French hospitals infected wounds are exposed to the continuous rays of ordinary electric light bulbs. He was impressed with the fact that there was a marked decrease in pain, and that wound healing progressed very satisfactorily under this form of treatment.

I would strongly urge all of my colleagues to give this treatment a careful trial, and I am confident that all will adopt it. I believe that the general introduction of this form of treatment of septic wounds, especially of extremities, in army hospitals would result in great reduction of suffering, as well as a rapid improvement in the condition of the wounds.

The apparatus which we have found most useful consists of a simple reflector underneath which one or two ordinary electric light bulbs are suspended. The amount of heat can be varied by changing the bulbs to increase or decrease their candle power.—A. J. Ochsner, M.D., in *Western Medical Review*, 1918.

THE CLINICAL APPLICATION OF DEEP ROENTGEN THERAPY*

By JAMES W. HUNTER, JR., M.A., M.D., Norfolk

It is my purpose upon this occasion to present in as brief and consistent a manner as I may some of the salient features of deep roentgen therapy; viz., the principles upon which it is based and its clinical application. For many years we have recognized the underlying principles; yet it is only recently that the mechanical factors have been perfected, the tubes developed, measurements accurately made and the results observed. But, after all, to quote Dr. Isaac Levin, "we must remember that we are physicians, not physicists." No one will gainsay this truth. Deep roentgen therapy, like every other therapy, must be measured by its results and judged accordingly. And, like any other therapeutic agent, what is good for all things is good for none. "There is only one lamp by which my feet are guided," said Patrick Henry, "the lamp of experience." Medicine and surgery in no way differ from this precept.

It may be stated most emphatically that malignancies, most glandular affections and certain diseases of the hematopoietic system are best treated by some form of surgery or radiation. I think that we may with perfect propriety eliminate any discussion of injection or medical treatment. I am, like you, perfectly familiar with the various attempts along this line. I am familiar with the injection of the mixed toxins of erysipelas and prodigious, with the so-called medical treatment as advocated by a distinguished dermatologist in New York, and the infusion of a solution of colloid copper or other metals. Very recently the lay press has been stirred by the reputed discovery of colloid lead as a specific for malignant disease. But, like many other solutions, given a little time, it will be found useless and will be dis-

carded.

And so we come back to our assumption. In the treatment of malignancies, most glandular affections and of certain disorders of the hematopoietic system, there are but two agencies therapeutically to be considered. In surgery we include all forms of operative manoeuvre, of whatever nature, whether by the knife per se, electric coagulation, or other device. By radiation we, of course, refer to radioactive substances such as mesothorium, radium and their kindred elements, and, lastly, to the roentgen rays.

And we must also remember that all malignancies fall essentially into three groups:

(1st) those in whom we may reasonably expect a cure as the result of surgical interference;

(2nd) those in whom the patient will recover, but the malady will recur; and

(3rd) those that are hopeless.

This, then, delegates the hopeless and border-line cases to some form of radiation therapy, leaving the favorable cases decidedly in the minority. Thanks to the propaganda directed by an eminent society of operators, patients are seeking advice earlier and earlier. In strictly operable cases the best thought still advises operative interference, though, even here, the question must be asked: if such unexpected results have occasionally been obtained in the borderline and hopeless cases, why not give the patient the benefit of the radiological procedure? I was more than astonished, when I attended a symposium on carcinoma of the uterus some years ago at a meeting of the American Medical Association to hear the view expressed that operation for carcinoma of the uterus was a thing of the past. I was likewise astonished to read that carcinoma of the lip was not a surgical disease. And, even later, I read that carcinoma of the breast should first be given the benefit of radiotherapy.

*Read before the 28th Annual Session of the Tri-State Medical Association, Fayetteville, N. C., February 16-17, 1926.

Please bear in mind that I make no claim for such views of my own accord; but only cite them to show the present trend of surgical opinion.

Then, too, we must bear in mind the part to be treated and the kind and quality of the lesion. Personally, I feel that a sarcoma should never be incised; but I make no claim as a surgeon or for surgical technique. Again, it is the consensus of most roentgenologists that equal, if not better, results are to be obtained in the treatment of exophthalmic goitre by the elimination of any focal infection and the application of a radiological agent, than by the surgical removal. But I make no comment. This much, however, I shall say: every patient is a unit unto himself and must be considered as such. Or, to modify the quotation from Dr. Levin: "After all we are physicians." It is the patient himself, with whom we have concern.

The application of the various radioactive minerals, such as mesothorium or radium, or of the roentgen rays, is a matter of degree rather than of kind. Likewise the question of filters. There is no doubt that the gamma ray of radium is as yet the most penetrating ray that we possess; but we must also remember that, in order to obtain results in certain cases, the quantity of radium necessary will be a large one. Radium must, however, be considered the element of choice in local lesions, where the mineral may be applied or the emanation inserted, and in cavities as in the vagina. But we must remember that the law of squares and the law of absorption here come into play. Thus, if a known unit of radium will give an erythema dose when applied one centimetre from the skin, there could only be one quarter of the dose at one centimetre below the skin, even if the law of absorption did not interfere. Again, referring to the use of the roentgen ray, it has been thought best to apply the new therapy at a skin-target distance of fifty centimetres,—that is, with such a dosage as will produce upon the skin at fifty centimetres an erythema. If we omit the law of absorption, as be-

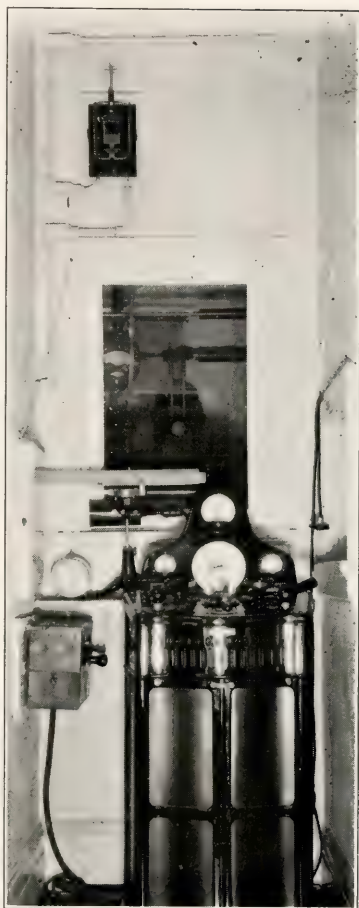


Fig. 1. Switchboard of the Author's machine, showing Weatherwax-Leddy galvanometer control.

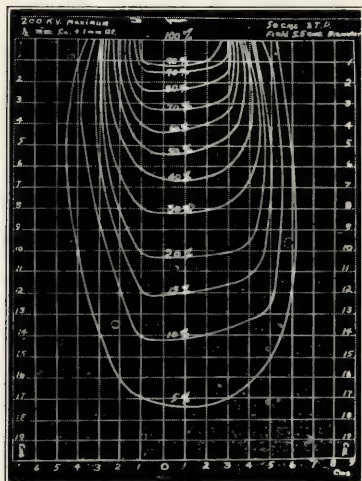
fore, we shall find at a distance of one centimetre below the surface a dose of $(50/51)^2$, or almost less than a loss of four per cent. Thus, when deep lesions are to be treated, such as lesions of the thorax or abdomen, the new roentgen therapy has the advantage. Even granting that sufficient radium could be procured as to give the same dosage at the same distance, its cost would be prohibitive.

Then too we must consider the question of absorption. While the same law holds true whether radium or roentgen rays be used, we must see to it that some form of screening is employed, so that the lesser rays may be eliminated. In the case of radium, brass or lead is usually employed. In deep roentgen therapy we employ usually from one-half to one mm. of copper. Copper, however, has its distinct spectrum and its specific action; hence we supplement the filtration by the addition of from one to two mm. of aluminum; just as in the case of radium, rubber is usually employed. We thus see that in the employment of a radiological agent in the treatment of deep lesions of the abdomen or chest, we must employ the new short wave therapy if we expect to achieve any material results. This statement can, I think, be made without fear of contradiction. I would repeat that if any result is to be hoped for in the treatment of the thorax or abdomen, deep roentgen therapy must be employed.

Nor shall we forget the law of absorption, to which we have referred. No

matter how hard the rays of radium or of the roentgen rays, a certain amount of absorption will take place. Fortunately for us the absorption of water and of the human tissues is identical, and by means of a reliable measuring device the amount of absorption can be directly shown at any given depth. We must also remember the law of secondary irradiation. Tissues absorbing the rays of radium or those from the roentgen tube will give off other rays as a result. These will also vary according to the amount of tissue exposed. Here the water phantom has its uses and we can measure with great accuracy the amount of the combined irradiation at any depth. This calls for an arrangement of cross firing in the treatment of deep lesions. Fortunately, we have been given some anatomical cross sections by Desjardins and by means of colluloid cones, which have been properly ruled to show the various doses at the various depths, we can determine in advance where and how much irradiation to apply. This applies particularly in cases in which we use the new short wave therapy, and is not applicable except in theory to the application of the old therapy or of radium. Thus it will be seen that we can apply any amount of dosage anywhere we will.

I have purposely not gone into the physical properties of the new roentgen ray as compared with the older one; nor shall I attempt any elaborate explanation. Suffice it to say that in the older roentgen therapy we employed a tube capable of delivering some five milliamperes at a voltage of perhaps one hundred and thirty thousand; that is, a spark gap varying from eight to nine inches. This was filtered through varying amounts of aluminum and given at various target-skin distances. We now employ a tube capable of giving from five to thirty milliamperes at a voltage of two hundred thousand, or approximately at fourteen and one-fourth inch spark. These rays are filtered through copper and aluminum and given at a target-skin distance of fifty centimetres, or twenty inches. Thos



distance we feel is the ideal. If we refer to Sharer's rule, that the penetration of the rays is directly proportionate to the square of the voltage, we shall find that we are using a penetration many times that to which we were accustomed. In the case of the author's machine, we have a determined dosage of 350 milliamperes minutes to obtain an erythema, using as a filter one-half of a millimeter of copper and two mm. of aluminum.

electro-positive ray; a beta, or electro-negative ray; and a gamma ray,—also electro-negative, arising as a result of the bombardment of the beta rays. These latter are the rays most valuable in the treatment of deep disease and are obtained in a pure form only by a filtration of brass or lead. They are identical in kind with the roentgen rays and only differ in quality. It is authoritatively stated that the rays from a

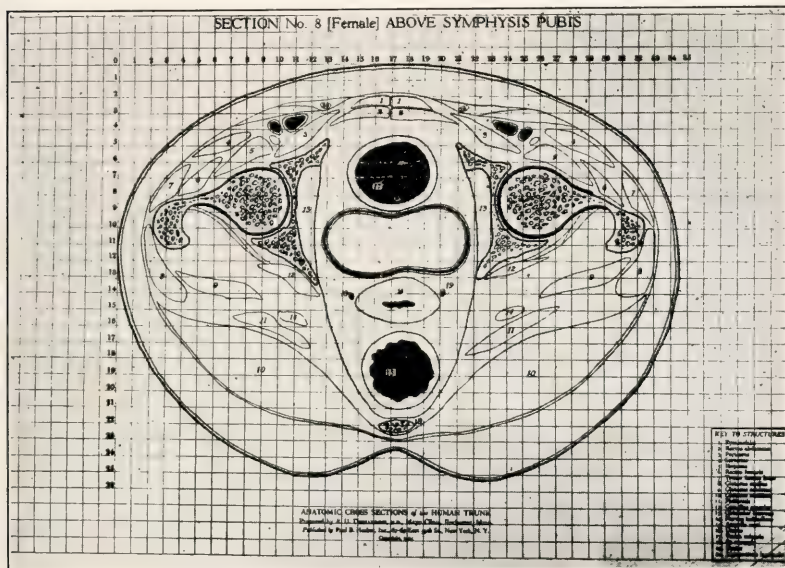


Fig. 3. Typical Desjardins cross-section.

As I have remarked above, it is not my intention to go into the physical properties of the new roentgen rays as compared with the older ones. Nor is it my purpose to discuss the pros and cons of radium application, or the use of its emanation; yet so much difference of opinion seems to exist in the minds of surgeons and others regarding the relative values of radium and of the new roentgen rays that a word of explanation will not be out of place. As we have remarked above, the difference is one of degree rather than of kind. The rays of radium are an alpha, or

Coolidge tube backing up a spark of twenty inches, or three hundred thousand volts, would be the equivalent of the gamma ray of radium. Of course, as yet, such a tube is not available, but we have an apparatus capable of delivering rays backing up a spark of fourteen and one-fourth inches, of two hundred thousands volts. By a simple application of the law of squares we see that we have in the gamma ray of radium a coefficient of nine, and in the roentgen ray one of four. The gamma rays, however, are only to be obtained in a very limited quantity; the roentgen

rays are unlimited in quantity. Yet, while we acknowledge the superiority of the gamma ray in penetrating power, the question may well be asked: does the gamma ray of radium possess very much greater therapeutic values than those resulting from the newer roentgen tubes? And may we not also ask the question: is the reduction in the price of radium due solely to the discovery of large quantities of radium-bearing ore in the Congo?

The application of the rays themselves is a matter for careful consideration. We must take into consideration the general condition of the patient; also the size, position and character of the lesion and the amount of dosage deemed proper. By this means we are dealing with an exact science. The dosage has been carefully measured and is to be carefully applied. We no longer feel the uncertainty as in the older methods, especially with the gas tube.

The biological effect calls for the greatest amount of observation and expertness. In no domain of therapeutics must a more careful consideration be given to the question of dosage. Primarily here, as always, the patient is the first consideration. Just as we would not administer a lethal dose of any drug, no matter how urgent the application, just so we must support and conserve the kindly forces of nature. Irradiation is a destructive and not a constructive agent. If we break down an offending lesion, we shall release some of the toxic material into the system. This will act in two ways: first, to make the patient sick; second, to stimulate the forces of resistance. For this reason most of the therapists have condemned the old method of applying the entire dosage at one sitting. By the newer technique the patient is not made so sick, the conservative forces of nature are stimulated, and there is less danger of an idiosyncrasy. We use a saturation dosage. This tends to keep down karyokinetic changes and to promote the absorption of the broken-down tissue.

There will often develop an irradiation

sickness. This is likely to come on within a few hours and is usually marked by nausea and even vomiting. Some years ago it was thought necessary to control the dosage by the white cell count for this reason; now we feel that this may be dispensed with. Just what the condition is I do not know. Whether it is primarily due to the inhalation of ozone or nitrous acid generated by the electrical current about the tube, or whether the rays themselves in their action upon the tissues, is still a matter for dispute. Likewise, whether we are dealing with an acidosis. Suffice it to say that it is my own experience that in a well ventilated room and using a machine emitting little or no corona, together with a water cooled tube, less intoxication is to be expected than in the older procedure. An intoxication is, however, apt to occur and this can be treated by appropriate remedies.

Far be it from me to prescribe any hard and fast rule as to the class of cases to be treated by the new therapy. Every case of malignancy, whether operated on or not, glandular infections, certain diseases of the hematopoietic system, certain cases of uterine fibroids, and all inoperable and hopeless cases. These should be given the benefit of treatment. Right here permit me to say that I am often asked the question as to whether any good can be done in a certain case. Personally, I have felt there was not; yet I have answered, "It is all that we have." There is always hope where there is life. No matter how skilled we are, or how confident in our own judgment, we must remember that there is One higher than we, to Whom matters of life and death are entrusted.

We must not fail to make use of every method available for applying surgical or radiological aid. We must remember that often a combination of methods is more effective than one. Thus carcinoma of the uterus is best treated by a combination of deep roentgen therapy to the outside of the body, cross fired so as to deliver a sufficient dosage to the parametrium, the ligaments, the

glands of the pelvis and the mesentery, as well as by the direct application of radium to the endometrium. Another example will not be out of place. In the treatment of prostatic carcinoma, no matter how we may insert metallic radium in needles, or radon in the lobes of the prostate by means of a stab through the perineum, we must remember the law of squares and that of absorption. We shall, accordingly, see that treatment by deep therapy is also indicated. But, as I have said above, (and I would lay especial emphasis upon this point), every patient is a law unto himself.

selves. I may state, however, that I have treated uterine bleeding with a peculiar success. I have treated several cases of carcinoma of the breast after surgical removal and have treated some recurrences. A recent case will illustrate my meaning. Of many recurrences treated by the old method, when lumps or "pills" were to be felt in the supraclavicular region, none recovered. In this case the "pills" promptly disappeared. I have treated some hopeless cases, who have died. I have prolonged the lives of some others. I have now under treatment several cases of inoperable squamous cell carci-

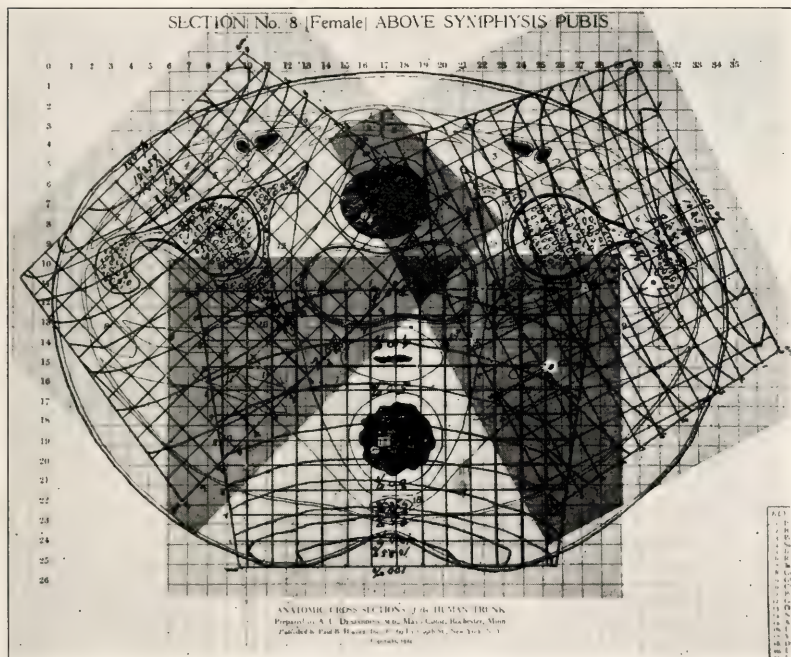


Fig. 4. Showing arrangement of "cones" of depth dosage and cross-section. By this means an desired amount of irradiation can be supplied.

I do not propose to burden you with a recital of cases. For one reason my own experience (as well as that of others) is too recent. If we demand the four-year period of cures from the surgeon, we must expect to give it our-

noma of the cheek and mouth. Some of them I expect to cure! some I expect to lose. In a case of lymphatic leukemia I have greatly relieved the patient. The enlarged cervical glands promptly disappear. Another case with the symp-

toms of Hodgkin's diseases, but diagnosed microscopically as a bilateral carcinoma of the cervical glands, has been markedly relieved. These are some of the cases that I have had under treatment for some time. But to them must be added quite a number of now beginning treatment. Of all these, however, more later. If I am pleased with my earlier attempts with the old low voltage therapy, I am anticipating a greater field of usefulness with the new.

To sum up:

We have in the new high voltage the-

rapy the most efficient agent that has as yet been given us for malignancies, for certain glandular disorders; for some uterine fibroids and for certain disease of the hematopoietic system. All patients must be considered as separate entities, and treated accordingly. The combination of surgery (I would include electric coagulation) and radiological agencies is earnestly to be desired; for it is by this means, and by this alone, that we can hope to do our full duty to our patients.

PUBLIC SESSION

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

Dr. J. V. McGougan, Fayetteville, presiding.

Tuesday, February 16, 1926, 8 P. M.

Dr. McGougan:

Ladies and gentlemen, the exercises for the evening will now be opened by a word of prayer by the Reverend J. H. Shore.

INVOCATION

Rev. J. H. Shore, Pastor Hay Street

Methodist Church, Fayetteville.

O Thou Eternal and Everlasting God, Whose attributes are perfect, we would recognize Thee in all things and acknowledge Thee in all of our ways. Thou art the first and the last, the beginning and the end, the Alpha and the Omega of all things. We are the creatures of Thy hand; this world was created by Thee, and man was placed here and given the great command to develop its possibilities. As we gather together here this evening, O God, help us all to turn our thoughts toward Thee, to lift our hearts to Thee in affection, and to recognize Thee as the one in whom we live and move and have our being. We pray Thee, our Father, to bless this association that meets in our city; bless these men who have given their lives to the relief of human suffering; to the discovery of remedies and the application of those remedies for the ills of man. We pray

Thee, our Father, to bless them in their work; grant, O Lord, that they may find their chief joy and happiness and satisfaction in the fact that they are rendering service to humanity, and thus service to God. Hear us as we pray; guide this body in all of its deliberations; and finally, our Father, when we have finished the little span of time, may we come to its end conscious that we have done our part and done it well, for Thy glory and for the glory of Thy purpose in the world. We ask this for Christ's sake. Amen.

Dr. McGougan:

Ladies and gentlemen, this job I have tonight has rather been forced on me. I did not know until this morning that I was going to be master of ceremonies.

We are fortunate tonight in having with us the governors of North and South Carolina. We expected the governor of Virginia to come, also, but on account of serious sickness in his family he has not been permitted to be with us.

It is not necessary for me to introduce Angus Wilton McLean, Governor of North Carolina. Probably it would be fitting for me to present him, but not introduce him. That boy and I were raised in the same neighborhood, and lived on adjoining farms,

It was our pleasure at one time to plough an ox. We left home the same year; we went to the university the same year. He took his profession, and I took mine. Dr. Hall, have you a telegram there from Dr. Cyrus Thompson?

Dr. Hall: I haven't it with me. He is sick and has been unable to be with us.

Dr. McGougan: When I am in the presence of lawyers, I always think of what Dr. Thompson said once. He said that when he was called upon to speak in the presence of lawyers, he always felt that, by the grace of God, he belonged to a profession a little bit better than theirs. (Laughter and applause.)

Governor McLean and I went to Chapel Hill in the same year; in fact, we belonged to the same fraternity. It is a pleasure to me to present to you your Governor, Angus Wilton McLean. (Applause.)

(Governor McLean's Address published in April issue.)

Dr. McGougan:

Because some of you might think that these hard-headed Scotchmen are trying to predominate here tonight, I am going to ask Dr. Oren Moore to present Governor McLeod, of South Carolina:

Dr. Oren Moore, Charlotte:

Down on the imaginary border which separates North Carolina from South Carolina lies a little, sleepy town known as Pineville. That town boasts only some three or four hundred inhabitants, but its history is unique. It has produced two great men who found their nativity in that small hamlet. The first of these two great men was a president of the United States, James K. Polk; the second of those two great men is your humble servant, Dr. Oren Moore. (Laughter.) I was born on the South Carolina side of that line, and hence am a South Carolinian. I am an expatriate South Carolinian, since I have found my livelihood in a city of your state, but I had to move only a matter of about two hundred yards.

Another thing that adds to the uniqueness of this occasion is that I am the only man on the stage, besides General Bowley, not in evening clothes. (Laughter.)

I know you have all heard about the oc-

casion when William Jennings Bryan was to speak in a western town between trains. He had fifty minutes to stay there, and the man who introduced him took forty. Someone asked one of his hearers the next day, "How did you like Bryan's speech?" "Well," said the other, "he was pretty good, but the old bald-headed man who followed him was better, I thought." I see that Governor McLeod, like Bryan, is bald (laughter), and I am sure that his speech, as was Bryan's, will be better than the introduction. I am only going to say that, since I am an obstetrician, it is my privilege in life to present to the ladies that which they most desire, but never before has it been my privilege to present a governor. (Laughter and applause.) So tonight, ladies and gentlemen, it is my extreme pleasure and privilege and honor to present to you that distinguished South Carolina gentleman and governor, Thomas G. McLeod. (Applause.)

Dr. James K. Hall, Secretary of the Association, read the following telegram from the Governor of Virginia:

"Richmond, Va., Feb. 16, 1926.

"Governor Angus W. McLean,

"Fayetteville, N. C.

"I regret very much that I can not be present this evening at the session of the Tri-State Medical Association. We are right in the midst of a very busy session of the legislature, and I have to address the General Assembly this evening. I wish to assure you of my deep interest in the Tri-State Medical Association, my appreciation of the splendid work that is being accomplished by it, and my desire to co-operate in every way possible in promoting the health of the people.

"H. F. BYRD."

Dr. McGougan:

The length of our program forbids my taking up any time in explaining these little souvenirs that have been handed to me by Mrs. J. H. Anderson, and I shall simply read you the note accompanying them. Much could be said, but I have not the time.

"This is a scroll which contains the last public letter of Jefferson Davis, written to the City of Fayetteville declining the invitation to the centennial celebration of the

ratification of the Constitution of the United States, on November 2, 1889. This event took place in Fayetteville, in 1789, in the old State House, where now stands the old markethouse. This letter of President Davis's is a brief and interesting history of North Carolina up to 1889, and contains many tributes to our state.

"This souvenir of Fayetteville is given to each of the three governors who are in our midst by the J. E. B. Stuart Chapter of the United Daughters of the Confederacy."

The souvenirs were presented to the two governors present, and one to Dr. Hodges for Governor Byrd of Virginia.

Dr. McGougan:

I am not going to introduce anyone; I am going to present someone; a son of California adopted by the state of North Carolina, and we are glad to have him with us. It gives me pleasure to present General A. J. Bowley, commander of Fort Bragg.

ADDRESS

General A. J. Bowley, Commander of Fort Bragg, N. C.

Your Excellencies, Mr. Chairman, My Friends:

I wish to thank Dr. Moore for including me in his class, and I wish that I were in his class of wit and humor. (Applause.) Many of you know that I am classified as being one of the greatest boosters of North Carolina (applause), and I am proud of that title, and of the privilege of boosting this great state. But in the presence of this society that we have here this evening I am going to take a little time and boost our sister state of South Carolina. You have listened to remarks about the hospitality of that state. I heard of that hospitality from the day I was born. My father told me many times how the state of South Carolina, and particularly the city of Columbia, South Carolina, entertained him in the most royal fashion for a period of seven months. In fact, they thought so much of him that they refused to let him leave their midst. The hotel in which we was confined is still to be found in Columbia, S. C. I may state, for some of those who are a little over anxious, that this was in the winter of 1864 and '65, when a gentleman could safely be confined

in a jail at Columbia, S. C., without losing his self-respect. (Laughter.) And I might state further that the hospitality he received was mainly corncob meal and a hitch of the belt. (Laughter.) I hope you will accept the hospitality of that great city, and I hope I shall have an opportunity to go with you and visit the hotel of my father's experience. (Applause.)

It was very interesting to me to hear our distinguished chairman tell how he worked behind a plow in his early youth. Certainly that was before he took up the medical profession. Now, I can tell a story on him which he himself tells, of another instance, which was not an experience with an ox, but with a mule. He went sparking in his earlier days, before we had automobiles, and his vehicle was drawn by a very fine, out-stepping mule. When he arrived at the home of the charming young woman that he went to visit, he took the mule out of the shafts and hitched it to a tree. After staying a considerable length of time, he came out, and found that his mule had departed. Only the bridle remained hitched to the tree. He was afraid to go back into the house, because of the lateness of the hour; he likewise was afraid to leave the testimony of his visit there, in the shape of one buggy, so he took the bridle and then got into the shafts and started for home. (Laughter.) Fortunately for him, the night was dark. When he reached a stream where there was a ford, with a foot bridge near it, he suddenly heard voices. He thought he recognized some of those voices, and he wondered what the stories would be that might be told on him if he were discovered between the shafts. So he truck boldly out into the stream, saying: "Get up, mule; get out of the stream; get up, you mule." So he carried himself safely over without being discovered. (Laughter.)

We in the Army are particularly interested in the medical profession, the first profession of the world. We feel justly proud of the splendid work that has been done by the officers of our medical department. You all know the history of Major Walter Reed, and what he has done for your profession. You all know of Gorgas's work in Panama, and how he made it possible that the canal could be built. Many of you may know how the medical department of the army cleaned up

Havana, and how they have established the finest possible sanitation in the island of Porto Rico; how they cleaned up the Philippines and made them a place where white people have been able to live, and how they have worked in every big disaster that has ever struck these United States. Here in this state alone I can refer to the fire at New Bern and to the disaster at the mine at Sanford, where the medical department of Fort Bragg did the finest possible work in caring for those who needed attention, in building up the proper sanitation, and in saving many people from sickness, and giving help to many of those who needed attention. We in the Army are especially proud of our medical personnel. We have wonderful men in their ranks, men capable of doing anything in surgery or medicine. I may refer to one, for instance, Keller, in Washington, a man whom the Mayos have been trying year after year to secure, and yet, for the love of service in the Army, he stays by us. And there are others. We have them here at Bragg, and, let me tell you, we are proud of them. Your whole profession is one of which the world is proud, and Fayetteville is extremely fortunate in having this splendid aggregation of medical men in its midst. (Applause.) I very much regret that your time is so short that there has not been an opportunity for me to have you out at Bragg, to show you what we in the Army are trying to do, how we are trying to build up manhood. Many of the men who come to us as recruits are undersized, underfed, and in a very short time we find them growing in height, growing in weight, standing up, and stepping out as if they were going somewhere. All this is under the direction of our medical men, who watch balanced diets, who watch proper sanitation, who watch proper exercise, and who are constantly in touch with organization commanders to see that the men are properly developed. I would that we could show you just a little bit of our professional work. You have had many bombardments since you have been here, no doubt, and will get more in the future, but we could have put on a bombardment for you out there with every gun from a 75 to a 240, and it would have created just a little bit of interest in an artilleryman's side of life. It is a pleasure to know how many of you belong to the officers' reserve

corps, one branch of our national defense, men who stand ready to step into the army in case of a big emergency.

I hope that if any of you have time you will pay us a visit at Fort Bragg, and it will give me the greatest pleasure, and it will be a pleasure to my officers, to show you about and to give you what little we can of Fort Bragg hospitality, which, I assure you, has been learned from both North and South Carolina. (Applause.)

Dr. McGougan:

Ladies and gentlemen, don't allow yourselves to be swept off your feet with governors and generals. (Laughter.) The better part of this program is still in store. (Laughter.) You know we have another Scotchman down here that came all the way from Chicago to deliver an address tonight, and before he delivers that address we have just two more, and both of them are fine. Now, I do not play bridge, neither do I play poker. (Laughter.) Neither do I go to moving picture shows. A great many of you will do all these things and still get home in time to go to bed. Even if we keep you up just a little later, I believe you will be fully repaid for staying.

The next speaker is the president of this society, about whom you have heard so much. I want to tell you that in my opinion he is one of the greatest surgeons in the South. As I stand here I see three persons who I know have felt the touch of his delicate hand and his sympathy. I am sure you will all be delighted to hear from the President of the Tri-State Medical Association, Dr. W. Lowndes Peple, of Richmond, Virginia.

(The President's Address published in March issue.)

Dr. McGougan:

I shall ask Dr. Hall, the Secretary of the Tri-State Medical Association, to present the next speaker, a man who is, I think, one of the most valuable members of the medical profession in North Carolina.

Dr. James K. Hall, Secretary:

Homer tells us, in the mightiest epic the world has ever known, that Jove sent from the top of Olympus his messengers to the peoples scattered throughout the world. Sometimes the messages were of peace; sometimes of disaster. You are God-fearing peo-

ple before whom I stand. You believe, and I believe, that the Ruler of the Universe makes manifest His omniscience and His omnipotence through human agencies. I believe, Mr. Chairman, that the great state of North Carolina has housed in its capital city of Raleigh an agency through which Almighty God renders protection to the people of this commonwealth, and through whose hands He sends out healing to the sick. Your State Board of Health has this agency in its service; your State Board of Health discovered him. Through this agency (the man whom I am about to present to you) typhoid fever has been driven from your borders, smallpox is unknown, diphtheria has been robbed of its terror, lockjaw has been brought under control, and hydrophobia is being driven out of the confines of the state. When the doctor who goes into your home takes from the sick member of your family a little blood, a little sputum, or a swab from the throat, he sends it away on the train, and this agency, this man in Raleigh, tells your doctor what is the matter with that sick member of your family. I have known him for a long time. If he were cross-sectioned with a microtome, if he were pulverized in a mortar, boiled in a caldron, burned in a furnace, he would come out what he has always been, pure, unalloyed gold. I am talking to you about Dr. Clarence Albert Shore (ap-
 plause), who is in charge of the State Laboratory of Hygiene in Raleigh, North Carolina. I happen to know that inducements have come to him to leave the state, for years and years, but to them all he is plumb deaf and blind. He has never heard one of them nor seen one of them, and I hope he never will. I think he is about the most efficient civic servant any state ever had, and I look upon him as about the finest man God ever made—Dr. Clarence Albert Shore. (Ap-
 plause.)

Dr. C. A. Shore, Director State Laboratory of Hygiene, Raleigh:

Dr. Hall is an old, old friend, so I know you will make allowances.

The subject I have chosen for tonight is rabies, or hydrophobia.

(Article to be published.)

Dr. McGougan:

My friends, on behalf of the Tri-State

Medical Association I wish to thank the people of Fayetteville for coming out to this meeting tonight. I have an idea that you have been fully repaid. In that connection, I wish to thank Governor McLeod, General Bowley, and the gentleman who will now address you, and who has come all the way from Chicago to make this crowning effort for your entertainment. It affords me great pleasure to present to you Dr. Allan Craig, of Chicago, a member of the American College of Surgeons.

DOCTORS, SCIENCE AND HUMANITY

ALLAN CRAIG, M.D., C.M., Chicago

Mr. Chairman, Your Honors, Ladies and Gentlemen: We have come here tonight to show you that the doctors have moved out of Pill Alley and that the slogan of modern, up-to-date medicine is "Safety first" for the sick, and "Stop, look, and listen" for the rest of mankind. Just after the orgy of expenditure at Christmas and the holiday season, some of us visited our banks with a sinking feeling. With many it was not a case of whether or no we were busted, but rather of how busted we were.

May I ask you tonight as individuals, what is the state of your physical bank account? Our business men are constantly talking about reserve. What is your physical reserve? What savings have you in your physical bank? If you had to face a serious surgical operation tomorrow or if some group of poisonous bacteria were to fasten themselves upon you next week, what surplus power and resistance have you to cope with the emergency? Ask these questions of yourself; ask them of every member of your family. There is only one man who can give you an intelligent answer, and he is your physical banker—in other words, your family doctor. He can tell you of your assets and liabilities and of your margin of safety. If you would only make your family doctor your physical adviser in the family as you make your lawyer your legal adviser in your business, you would go far towards preserving life and maintaining health and happiness in the world. Were such procedure universal in this

city or in this state, you would add an average of at least ten years to the span of human life.

Just two weeks ago I was passing through the State of Texas on the Sunset Limited, headed for Arizona. We were out on the Texas plains in broad daylight when suddenly the train came to a stop. I saw people running towards the rear; and, on looking out, the cause of the confusion was evident. A man had driven his car directly into the side of the second last Pullman of a fourteen car train on the level plain in the middle of the day. He crawled out from underneath the wreckage, the most frightened looking man I have seen in a long time. The train had not struck the car but the car had run into the train. How often in everyday life do we, even in the light of modern knowledge and opportunities, run directly into physical disaster with our eyes wide open and all sorts of means of avoiding a mishap?

There are three factors which destroy life. They are, first, disease; second, accident; and third, wear and tear. We have been preventing disease; we have been curing or attempting to cure disease; we have stop, look, and listen signs all over the place, and police officers on our street corners to direct traffic and prevent accidents, but the third factor, that of wear and tear, we have constantly neglected.

When I was a boy I spent my holidays on the farm. My grandfather used to tell me that if I would go down to the bottom of a well in the middle of the day when the sun was shining and look upward, I could see the stars. As a child, I did not realize that there were any stars in the sky in the day time. Blinded by the luminosity of the sun, I could not see them. So we, as busy, everyday individuals, are often so blinded by the light of commercial and business interests that we fail to realize our physical responsibilities. Some of us must necessarily go deep down into the wells of tribulation and suffering before we are fully awakened to the facts and necessities of our physical welfare.

There is in the world a law of nature known as the iron law of disuse. The ostrich is a large, lumbering bird but he cannot fly. Perhaps many centuries ago he could use his wings, but he discovered that he could kick his enemies and put them to rout more easily

than he could fly; consequently, he ceased to use his wings and has now lost the use of them entirely. The domestic duck waddles about the farm yard but he cannot fly because he, too, has ceased to use his wings for that purpose and has also lost the use of them.

Some fifty or sixty years ago, when a young man applied for a situation in a bank or business concern, he was examined as to his adaptness at figures and his ability to write a good hand. Go with me today into the office of your banker or big business man and what will we see? We will find him dictating to a stenographer and simply signing his name at the end. Even then the name is usually typed below the signature so the receiver will know who signed the letter. Most of these men could not write a respectable letter in longhand if they tried. Here again is the same law of disuse as we found affecting the ostrich and the duck. Many of us, when we desire to go a few blocks up the street, will immediately get into our automobiles to make the trip. We hesitate to walk. If some of us don't walk more, perhaps the iron law of disuse will have some effect in the future and we may lose our legs. This law of disuse is not to be disregarded. The solution of the problem, insofar as the business man is concerned, is to be found on the golf course, in the swimming pool, on the tennis courts, or in the gymnasium.

Three pages of medical history are filled with romantic interest. If we glance through its various chapters, we shall see scientific medicine gradually, but surely, shaking itself loose from mystery and superstition and becoming firmly established upon truth and facts. Sir Francis Younghusband, in writing concerning the three young men who last summer lost their lives in a valiant attempt to scale Mount Everest, said, "Man grows in wisdom and in accomplishment but the mountain's stature is fixed. Man can exalt the spirit within him, but the mountain cannot add one cubit to her measure." Here we have a graphic illustration of the conquest of mind over matter. Reverses and failures in matters of investigation, search, and research, have but stimulated progressive man, made wiser and more cautious by his experience to renewed effort.

Again may I use an illustration? In the

spring of the year up in the north country, I used to delight to go out into the maple woods and watch the tapping of the trees, the dripping of the clear, sweet sap into the buckets, and, best of all, the process of boiling down. That which impressed me most was that, from a large amount of sap, but a relatively small amount of sugar was obtained. Our good, progressive, conscientious physicians today, collectively and individually, are gathering sap in the woods of personal experience, and boiling it down over the fires of rigid investigation. The residue of truth and facts is applied for the salvation and prolongation of human life.

Sitting by my fireside recently, I read the following bit of poetry:

He lives in a house by the side of the road
Where the race of men go by,
Those that are good and those that are bad,
As good and as bad as I,
He could not sit in the scorner's seat
Nor hurl the cynic's ban,
But live in the house by the side of the road
And be a friend to man.

How well that applies to our good physician with his keen insight into human nature and his friendship for mankind.

The young medical student who comes home from the university at the end of his first or second year, with a goodly supply of human bones, a strong odor of carbolic acid, and his pockets filled with samples from the dissecting room, usually gives the impression that he is becoming scientifically hard-boiled and that some day he will be sufficiently hardened to be a real doctor. Our good physician is a very human individual with human sentiments and human ideals. When he is faced with an emergency, he does not ask himself, "What can be said?" but "What can be done?" He must express his sympathies in actions rather than words; thereby he is frequently misunderstood.

The confidence and blind faith which the layman places in his doctors when he consents to take an anesthetic and have an operation is, I fear, not always appreciated even by the members of the medical profession themselves. The thoughts which pass through the

patient's mind as he is prepared for operation, as he waves a cheerful *au revoir* to his family and to his friends, and as he looks up into the face of the anesthetist and wonders how it will all end are seldom expressed; nevertheless they are there deep in the human mind. If you doctors don't think so, have an operation yourselves and see how you feel about it. Am I becoming sentimental? Well, perhaps so, but, after all, only human, and oh, doctor! what blind faith and confidence in you, a mere human being whom that patient is placing next to his God. Folks may joke about their operations afterwards, but they don't feel that way at the time. It is all a serious business and surely there is some just punishment for one who would not render the very best service within his power to that trusting patient.

There may be some here tonight who are wondering why it is that the doctors should come to you and talk about better health and longer life. You say, is this not bad business for the doctor? Is he not defeating his own ends? When I was a boy, I knew my own home county pretty thoroughly. I had fished in its lakes and streams, I knew every field, every bit of woods, every village and hamlet in that cold county of mine. Not so long ago I had an opportunity of passing over it in an aeroplane. I was able to look down upon it from an entirely different viewpoint; I was able, as it were, to look into the countenance of that old home county and see its features with relation one to the other, and, as a consequence, there came into my mind an entirely new conception. So, particularly since the car, our medical profession has looked into the face of our people and has come to realize more than ever a great public responsibility with regard to the health of each individual citizen and the nation as a whole. Our good, conscientious physician is striving to do his best—his little human best—to follow in the footsteps of the greatest Master and Teacher of all times Who said, "I am come into the world that ye may have life, and life more abundantly."

Note: This address was followed by a moving picture talk, "How the Fires of the Body are Fed" showing the processes of digestion and assimilation in the human body.

PRESIDENT'S PAGE

A. J. CROWELL, M.D.

The importance of medical societies and the work done by them is emphasized by the fact that our greatest medical men are the ones who are the most faithful in attending meetings and participating in the scientific discussion of papers. This is true in all medical society meetings from county to national. From a financial standpoint these men make far greater sacrifices in point of time than men whose incomes are less compensative. The society in which there is the least business and politics is the one from which a physician derives greatest benefit, and which counts most. Our state medical societies necessarily have much business to transact, such as that pertaining to the affairs of State Boards of Health, medical examining boards for doctors and nurses, the election of officers, hospital standardization in addition to the business affairs in connection with the National Association. This work is not only time consuming, but more or less demoralizing and greatly interferes with the work of state medical societies.

The Tri-State Medical Society is subservient to no other body, medical or legal, and can devote its entire time to the discussion of medical problems. In this respect it occupies an enviable position and fills a great need. Its only business is to read and discuss scientific papers, discuss medical problems peculiar

to this particular section of the country, with the exception of selecting the presiding officers, which is of no special interest to anyone.

I find I am not the only one who is of the opinion that the Tri-State's usefulness may be greatly increased by adding a clinical feature and thus make it more distinctive.

I quote you, from a letter which I received recently from Dr. Robert Wilson, of Charleston, S. C., in which he says:

"I have had in mind the possibility of a Clinical Association embracing the three States, but it occurs to me that the Tri-State, which is already a going concern, might be the medium through which this could be put into effect."

I would be opposed to combining the two and having them at the same time. The numbers would be too great at the scientific meetings to be furnished with ample clinical facilities in most of the towns in the territory, but a clinical feature can be fostered to advantage by the society for those who would care to take advantage of it.

I hope others are, like Dr. Wilson, studying the Tri-State's opportunities and will send in their suggestions. It is a great society but not so perfect that its usefulness cannot be improved.

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JOHN WHITEHEAD, DOCTOR OF MEDICINE

"Know ye not that there is a prince and a great man fallen this day in Israel." Ever since this noble tribute was paid by King David to his faithful and valiant warrior, Abner, these words recur when a truly forward man ceases from his labors and joins the innumerable caravan, whose ranks are ever swelling in that land watered by the River of Life. Such a man was the man who finished his career of great usefulness in his chosen field of labor in the town of his birth, April 16, 1926. John Whitehead, whose life I essay to portray with faltering pen, was born in Salisbury in the year 1855, and hence was permitted by a gracious Providence to round out the years accorded by the Psalmist. To what purpose those years were devoted and the harvest attained, let the grateful and almost worshipful citizens of this town attest without dissenting voice.

Reared under the careful tutelage of his distinguished father, Dr. Marcellus Whitehead, whose endowments and graces not only captivated all in his day and time, but, out of the abundance of his store-house, transmitted down the line to his two sons, Richard and John, a benediction and latent forces which, richly embellished by application and study, raised them both to high and rare distinction in Medicine which was as inviting to them as the green rich pasturage of lovely

valleys to the hunger of the herds of the plain.

After finishing his course at Davidson College and being awarded its degree of Master of Arts, he entered the University of Pennsylvania and took his degree in Medicine in that then, and now, college of highest rank in our country. Returning to his native town, he at once ardently took up the active work of an all round doctor, associated with his father. Perhaps it may, for some, mar these records to say that at that time the field of medicine included and assumed the care of the *whole body*. There were no specialists at that time, the body not being divided, like all Gaul, into three parts or any multiple of three parts. The doctor then was monarch of the entire machine. "Not only my feet, but my hands and my face also," after the manner of the apostle, were turned over to, and pre-empted by, the old time family doctor, and unobtainable records bear testimony that many more perhaps went down to their houses justified and bearing fewer marks of the slings and arrows of outrageous fortune than is now the case.

John Whitehead was preeminently the master of the whole craft. Combined with a rare skill of diagnosis and a profound knowledge of the actions of drugs, he possessed high skill as a surgeon and did many difficult operations on the human body. His resources in the wide field of materia medica and therapeutics were a near approach to marvelous. His dependence first was on the great field of remedial agents which a great and beneficent Father so mercifully has provided for the ills of the body; he believed fully in exhausting the field ere calling the knife into requisition. Let no one for a moment harbor the thought that I am belittling surgery. Its claims are monumental and its devices entitled to the highest credit; but John Whitehead believed that the flora of this earth held some of those potentialities, seen by the seer, lining and adorning the River of Life, "whose leaves shall be for the healing of the nations." For nearly fifty years John Whitehead went in and out of the homes of his community, and many more remote, always bearing himself as a prince and a true physician and carried with him the invocations of love and gratitude from every heart which felt his benign ministrations.

¶To say that he was among his medical brethren "facile princeps" is only a trite expression, admitted by all. Dickens has been said to be a "Shakespeare working in terra cotta." This earth and earth's sufferers and toilers claimed the mind and heart of him whom I am commemorating. His presence in the sick-room was a golden ray of sunshine and cheer. While my heart is, I admit, guiding and inspiring my pen, yet I have not in this sketch allowed the element of hyperbole to exert an influence. We were in Philadelphia at the same time, he at Pennsylvania and I at Jefferson. He honored me ever with his warm friendship here, and I look forward to a renewal of that friendship in that Land which needs no light of the Sun.

Thos. E. Anderson.

MEDICAL LIBRARIES AND MEDICAL LITERATURE

In its issue for February, the Long Island Medical Journal carried a discussion of this subject by the Librarian of the Medical Society of the County of Kings, which well merits the attention of medical men. The author of this article has charge of the third oldest medical library in our Country, it being antedated by those of Philadelphia and Baltimore only. In point of number of volumes its rank is fourth among those privately owned.

"There are two outstanding reasons why physicians hesitate to write papers, monographs or books. In the first place, they are unacquainted with the proper and orderly manner of preparation and arrangement of the matter which they wish to present and somewhat hesitant about the form of expression to be employed," says this writer, not as a discouragement, but as a preliminary to a suggestion of helps for writers of medical papers.

Among these helps are listed a number of small books treating of the preparation of essays by doctors, the first mentioned being Sir Clifford Allbutt's, "Notes on the Composition of Scientific Papers," published by the MacMillan Company, New York.

Another difficulty is unfamiliarity with indexes to the literature. In fact very few have learned to consult even a dictionary at all adequately. It may well be wondered if it

ever occurs to more than a small proportion of those using books that prefaces, introductions and explanatory notes have any functions at all, notwithstanding the circumstance that one of the volumes on Dr. Eliot's shelf consists of "Famous Prefaces."

The staff of the library of the County of Kings is placed at the disposal of doctors wishing to be started on the road to doing their own reference work. The special fields of usefulness of the quarterly cumulative index, the index catalogue, the index medicus and less well known works in this field are delimited.

The experiences of this great doctors' library have placed it in a position to be of great service to lesser ones. Few of these, worthy of the name, have been established in this State or section. These few should be used to more advantage by those maintaining them; some plan should be worked out by which they can serve the needs of doctors in contiguous territory, and one should be established and supported in a high state of efficiency in every populous country.

If our country doctors would familiarize themselves with the best methods of obtaining information for the elaboration and amplification of their experiences in their rich field of clinical medicine, and appear on the programmes in proportion to their knowledge and to their recognition of the relative values of different studies to the health of the State, our meetings would gain greatly in purposefulness and usefulness, and we city men would be relieved of the compulsion of listening so frequently to each other.

WORDS

An English scholar once expressed it as his opinion that, of all books, the dictionary afforded the most interesting reading. Though we may not be disposed to agree at first blush, when we turn the matter over in our minds and recall how often we start out to learn the precise usage or derivation of a word and become so much interested in others as to forget our original intention, we conclude that he was not far wrong. And maybe the dictionary which brought forth his praise was that of Dr. Johnson, who defined *oats*, as: "In England, food for horses; in Scotland, food for men," which definition gave a Scot

the chance to retort, "and that's why you have so fine horses in England and we have so fine men in Scotland."

It is unfortunately true that here (as in so many other instances) those who have, get. There is a general tendency on the part of the little-informed to deride the correct use of language as something "English," "Bostonian" or "effeminate." This is a heritage from our cave-dwelling ancestors whose ideal of manhood was he who could beat in the most men's skulls and drag off the most women by the hair of their heads; through the times of "Arthur and his Table Round," when a *noble*, on being asked, "Canst thou read," indignantly responded "Takest thou me for a clerk!"

Elegance, or even clearness, of expression does not harmonize with "hundred per cent, red-blooded AMERICANISM," which finds more congenial companionship with a vocabulary made up largely of "pep," "put it over," "go-getter" "dope," "sell yourself," and "so's your old man."

It is a singular thing that the most learned keep at hand reliable books of reference and consult them frequently; while most of those far down in the educational scale show a disposition to be ashamed of being seen so engaged, and thus admitting that they do not know everything about everything.

Just to what extent other animals possess the power to convey thought one to the other is problematical. There is considerable evidence that ants can tell each other a good deal, and many birds certainly understand calls to food and warnings of danger. But *homo* is wont to boast that he is a "higher animal" and only "a little lower than the Angels!"

Granting that it is well for men to think and to communicate their thoughts, and words being the chief medium, does it not necessarily follow that every reasonable effort should be made to understand this medium? A further reason in favor of this is the obvious fact that one who speaks loosely will think loosely and so on 'round and 'round the circle.

Of course there are many verbal projectiles lying ready to the hands of those who do not use words meaningfully, and there is a very general willingness, even eagerness, to make use of them; but these weapons, being

words, are wielded with little dexterity, and so do slight harm. "Knocker" is a prime favorite among these. However scatter-brained a scheme may be, if it purports to be for "boosting" the town or State any one who dares point out defects is immediately dubbed by these "go-getters," a "knocker." They even write him up in doggerel rhyme; and when his sensible predictions come true, far from being credited with foresight and courage, it is rather held against him that he did not involve himself in the general mess.

If one call attention to the fact that there is a difference between a chestnut horse and a horse chestnut, there is a very general habit of calling him "technical" or "a hair-splitter."

Readers may ask why discuss this in a medical journal! Because, gentlemen, it is desirable that a medical paper be so written that the man who has to edit it can ascertain what it is about, and so be enabled to transmit the meaning to the readers of his journal!

If an essayist chooses to write the name of the most commonly used alkaloid of opium with a terminating -ine, to refer in the same sentence to the alkaloid of belladonna; and spell it atropin, or atropia, is glaringly inconsistent and confusing.

If one be wedded to his diphthongs and prefer *haemorrhage* and *oedema*, let him not neglect to write our chief anesthetic, *aether*.

There is no implication in this that the majority of papers offered to medical journals are not well written. Many are delightful examples of lucid and elegant expression; some even have the charm of meticulous attention to subtle distinctions; but some of the other kind come in such form as to clearly show the desirability of the more general use of books of reference.

AN EDITOR'S DREAM

No one who reads much of contemporary medical literature will be disposed to deny that it is, on the whole, interesting and instructive. But having said this, one cannot but remark that it lacks at least one of the virtues that characterized the writings of the older physicians, we mean the clinical spirit and flavor. Why is it that article after article appears in our journals and yet out of so great a number so few treat of the helpful and common things that we medical men

most desire to know? Perhaps it is that writers in their search for the rare or the unusual are under a misconception as to what constitutes a valuable medical paper. We are supplied with enough and more than enough of imposing tables of statistics which, as Professor Karl Pearson has shown, have the appearance of science without its substance. For who but the veriest tyro would claim for statistical enumerations, as usually compiled, more than a very questionable value? We read positive statements about the utility of this drug or that in such and such a disease, but when we look more closely into the premises of the writer's conclusions we discover frail foundations and not a little confusion of thought. Again, for example, vaccines are enthusiastically used and their virtues generally extolled with no apparent sense of their limitations and dangers. Blood-pressure readings are taken and if deemed excessive, we are forthwith assured that the patient's symptoms are explained; and this, too, in the face of the fact that high blood-pressure of itself, does and can explain very little. And so with all our printing presses we are bewildered in the midst of an accumulation of facts and of doctors who disagree.

Some day in the future, the not distant future, let us hope, the Editor of the Rhode Island Medical Journal will receive in his mail an uncommon kind of article. As he reads it, a pleasant glow of satisfaction will suffuse his countenance and he will experience a quite unmistakable feeling of exhilaration. The author will submit it with an altogether too modest expression of reticence, the reason of this being that his contribution will seem to him so unlike the usual run of papers. And so will it be, for immediately he begins its perusal the Editor will observe that from his new contributor, a country practitioner perhaps, he is getting a discussion not of words but of things. The author has followed Lord Bacon's advice to learn from the things and not from the books about the things.

Here, indeed, is a man who has patiently studied human beings during the complex

mutations of disease, who knows how to distinguish essential from merely contingent happenings, who has for long watched the effects and the interplay of regimen and remedies, and who has had leisure at night to reflect upon the experiences of the day. Leisure to reflect! What a difference that makes in his writing, giving directness to his descriptions, clearness to his statements, balance to his judgments.

Delighted thus far, the Editor is somewhat surprised to notice the complete absence of the customary rhetorical flowers plucked from German, French and other gardens. But the explanation soon appears. The author has no need of them. Like Duchenne of Boulogne he is too busy setting down what he has himself seen in hospital, in office, and at the bedside to encumber his pages with the discussion of other men's thoughts. Moreover, this writer thinks concretely and allows himself no high imaginings, for being of a practical turn of mind he will not permit himself to be misled by such airy subtleties as "disease entities," "morbid species," and "environmental influences." He describes few cases, but does so with great accuracy and a nice precision, because as he says, he is convinced that one case well studied over a considerable period of time is worth a score superficially observed for a mere fraction of their course. Finally, the author has something to say about treatment, since even in these days of diagnosis he is old-fashioned enough to believe that treatment still interests the patient. He tells what happened to those to whom he gave no treatment and how things turned out with those patients whom he treated this way or that.

Having finished his reading, the Editor will muse whether outside of a dream (for he has been dreaming all the while) he will ever receive this new and simply delightful kind of paper. He knows full well that among his readers are some who can send it to him, and may he venture to hope that before long his dream may take on form and substance?—*Editorial Rhode Island Medical Journal, Nov., 1920.*

DEPARTMENTS

GYNECOLOGY AND OBSTETRICS

ROBT. E. SEIBELS, M.D., *Editor*
Columbia

BIRTH INJURIES

In a study of natal and neo-natal deaths occurring at the Sloane Hospital for Women in New York, during 1920 to 1922, there are reported 18 deaths or 12% of 142 viable babies in primary breech deliveries, 18 deaths or 26% of 87 viable babies delivered by version and breech. The latter series is made up of cases where version was done for placenta previa, prolapsed cord, malpresentation or abnormal pelves.

Among these 36 mortalities, at autopsy spinal cord hemorrhage was noted in 47% and fractured vertebrae in 38%, while cranial hemorrhage was present in 44%. Thus, the autopsy demonstrated convincingly what Potter has long maintained, that the baby is killed by haste in delivery with a resulting roughness in manipulation, rather than by asphyxia. In this series of cases, the majority of the babies showed clinically asphyxia pallida (just the type of case in which we are apt to blame the respiratory apparatus rather than our own efforts) but autopsy showed that the usual lesion was fracture of the sixth cervical vertebra or spinal and cranial hemorrhage; or all three were the cause of death. In only two cases in the series does the author find that asphyxia alone was the cause of death.

This report suggests very strongly that many of the cases which we have diagnosed asphyxia pallida, blaming the mortality on failure of the respiratory system, are due rather to our own efforts at hasty delivery with the resulting injury to the blood vessels and bones.

In another study of 100 new-born babies upon which autopsies had been performed, Saenger arrives at a similar conclusion. He feels that no mechanism of labor is as dangerous to a child as the delivery of the after-coming head. Of 23 children delivered feet first that came to autopsy, only three failed

to show lacerations of the tentorium and only one failed to show intra-cranial hemorrhage. Thirteen of his cases showed hemorrhage after forceps operation and, in nearly all of these cases, the marks on the baby indicated that instead of a bi-parietal application of the blades, an oblique or an antero-posterior application had been used.

It has often been remarked as an anomaly of the obstetric art that a new-born baby is handled with a maximum of gentleness by nurses and attendants after its arrival into the world, but during its passage through the birth canal, may be treated with a minimum of gentleness by many obstetricians. The greatest teachers of obstetrics have long insisted that the baby should be delivered by the obstetrician only at cesarian section: in all deliveries through the birth canal, the obstetrician simply assists the natural forces of expulsion.

To turn now to the baby after birth, who, unfortunately has an intra-cranial hemorrhage, Sharpe has brought strikingly to our attention in a series of papers, the early signs of this lesion, and has indicated the appropriate treatment. Intra-cranial hemorrhage should be suspected when the baby shows unusual drowsiness which may progress to stupor, when there is difficulty or actual refusal of nursing—in the absence of obvious mechanical factors—or when it exhibits muscular twitches or convulsions.

While these may seem meager signs of so grave an injury, in a large series of cases studied by this author, in the majority of cases, these were all he had to go upon. He counsels that a baby exhibiting any of these, should have a diagnostic lumbar puncture and in the presence of bloody or blood-tinged spinal fluid, repeated lumbar puncture should be performed to relieve the extravasation of blood and to prevent its organization with resulting brain injuries. He says that the test of lumbar puncture itself is simpler than the routine procedure of taking the blood, the essential being a well flexed spine in the hori-

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EYE, EAR, NOSE and THROAT

Thomas E. Hughes, M.D.

zontal position, a hypodermic needle instead of a large lumbar puncture needle and no anesthetic. When blood appeared through the needle, immediate second puncture, one lumbar interspace higher, was made to determine whether the blood was surely coming from the spinal canal and not from a punctured vein. This puncture was made at 12 hour intervals until clear spinal fluid was found at a tap. He removed sufficient of the fluid until the pressure, as measured by a spinal mercury manometer, was within normal limits (not over 8 mm.) and states that as many as seven punctures of drainage were necessary in several cases and the average number was three. He advises that no drainage be attempted in cyanosed and badly shocked babies but that these should receive supportive treatment until their resistance has risen.

In his study, 45 babies have shown bloody and blood tinged cerebrospinal fluid among 500 new-born babies subjected to lumbar puncture. The Wassermann test was positive in both mother and child in only one case of these, four plus in two mothers but negative in their babies, one plus in two mothers but negative in their babies, and one plus in one baby but negative in the mother. The blood clotting time has been within normal limits for each baby having free blood in the cerebrospinal fluid, and has been prolonged in only six cases—and these six babies had clear cerebrospinal fluid.

Thus, again, the etiological factor has been shown to be birth injury rather than essential systemic disease in the majority of these cases.

The result of birth injury has long received the attention of the orthopedists and they have been most successful in applying very ingenious methods for relief of cerebral spastic paralyses. It behooves the obstetrician to look to his method of delivery to prevent the occurrence of this very serious condition, and to bear it in mind during the early days of the infant's life in order to diagnose and relieve it before the danger has been extensive and irreparable.

REFERENCES

- Potter, I. W.: *The Place of Version in Obstetrics*, St. Louis, 1922.
 Pierson, R. N.: *Spinal and Cranial Injuries of the Baby in Breech deliveries*, S. G. O. 1923. XXXVII 802.

Sharpe and Maclaire: J. A. M. A., 1926, LXXXVI, 332.

H. Saenger: (Quoted by DeLee, "Year Book — Obstetrics"—Chicago, Series 1924).

INTERNAL MEDICINE

PAUL H. RINGER, A.B., M.D., *Editor*

Asheville

THE MEDICAL SECTION AT THE A. M. A. IN DALLAS

An examination of the program presented before the Section on the Practice of Medicine at the meeting of the American Medical Association should be of interest as giving a cross-section of what the profession is mainly interested in. When a large number of physicians, some of the greatest prominence, many wholly unknown outside their immediate neighborhood, travel many miles to attend a meeting and when several hundred attend regularly the sessions of the Section on Medicine, it is clear that there is more to the program than merely a certain number of papers. The pulse of the profession has been felt by those moulding the program. The result is, in the main, a presentation of the problems in which men doing general medicine find their greatest interest. The writer was able to observe the interest shown in the proceedings at Dallas, and has thought that his impressions might be of interest to those readers of *Southern Medicine and Surgery* who were unable to attend the meeting.

The program was varied. The topic most conspicuous by its absence was nephritis, there being but one paper dealing with the kidneys, that on Renal Function. The respiratory system was considered, pulmonary cancer, rheumatic pneumonia and non-tuberculous peribronchitis being discussed. Arthritis was the subject of two papers. There were two papers on diabetes and one on Hodgkin's disease, one on abdominal malignancy and one on pernicious anemia. In sharp contrast to the lack of papers on the kidney, there were *nine* papers dealing directly with the circulatory system and these nine papers out of a total of twenty gave the keynote to the meeting. Consciously or unconsciously it cropped out that the heart and the blood vessels are those portions of the body, disease of which is occupying the thought of every medical man today. Of course closely

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intertwined with these are the degenerative renal changes, but these are usually secondary to circulatory alterations.

Why is it that circulatory disturbances are so greatly on the increase? It would appear to the writer that the following reasons stand out as explanatory:

1. Earlier discovery and diagnosis of circulatory lesions. The universal use of the sphygmomanometer and the greater appreciation of the importance of diastolic pressure have unearthed many cases of various types of hypertension until recently overlooked.

2. The restricted use of the polygraph and of the electro-cardiograph has given to a few a far greater insight into the normal and pathological physiology of the heart, and from experience with these instruments of precision, certain guiding rules have been deduced which have enabled the general practitioner to make a correct diagnosis in the majority of cases without the aid of costly apparatus.

3. As a result of preventive medicine and improved hygiene, human life has been prolonged many years and consequently far more individuals reach the age when circulatory diseases are most frequent.

4. The knowledge that serious cardiac conditions, e. g., coronary sclerosis, may and do exist without any definite symptoms or physical signs on the part of the heart itself. It is now known to all that the sudden deaths in men over fifty-five, apparently in perfect health, formerly attributed to "acute indigestion" are in the vast majority of the cases due to some form of coronary disease.

When a section such as that on the Practice of Medicine of the A. M. A. devotes practically fifty per cent of its papers to the consideration of various phases of one subject, it is obvious that that subject is of importance. Considering the question carefully, one must reach the conclusion that today diseases of the heart and of the blood vessels form the most important group in internal medicine. The problems of their causation, of their prevention and of their relief has barely been touched. It is not until we look back twenty years and see how far we have traveled on the road of pathological physiology that we gain a gleam of hope for the future. Much work is yet to be done and much water will flow under the bridge before the physi-

cian will feel that he has these circulatory diseases under the same control that he now exercises over malaria and typhoid fever, but light is bound to be shed where so many minds the world over are expending their best efforts in attempts to eradicate one of humanity's greatest enemies,—the diseases affecting the cardio-vascular system.

DENTISTRY

W. M. ROBEY, D.D.S., *Editor*
Charlotte

THE STATUS OF THE DEAD TOOTH

This question arises from day to day. The correct answer should be purely scientific. But, as with many subjects of medicine, a purely scientific answer has not been arrived at.

In the early 80's, or some forty years after the establishment of the first dental school in Baltimore, a violent discussion of the subject took place. It is probable that the argument, while apparently scientific, was a criticism and defense of the young profession of dentistry; for it appears that the dentists defended and the medical fraternity insisted on the elimination of "dead teeth."

The more recent debate has been conducted with a less personal and a cooler and more scientific temper, in spite of the fact many teeth were sacrificed on the altar of over-enthusiasm. This enthusiasm was increased by the peculiar fact that there is no other thing in dentistry that the profession individually and as a whole would rather do, than eliminate the "dead tooth." So the extraction of the tooth, and more often the extraction of the teeth, solved the problem directly and simply. The patient had no further tooth trouble, the dentist removed one of his most trying and unprofitable problems and at the same time extended the more profitable field of mechanical work. The business sense realized the virtue of the situation, and it looked good.

But the scientific and professional sense rebelled. The train of evils that follows the loss of the teeth is often as great or greater than those caused or often anticipated by the suspected teeth. The change of facial expression, while of minor importance compared to health, may be of grave importance when added to ill health, the faulty articulation of

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words may be the same, while the efficiency of mastication may and is often lowered to 30% or less, with artificial substitutes.

"Dead teeth" is a misnomer, when applied to teeth with devital pulps or nerves. Nourishment is supplied through the periodontal membrane to the tooth, though the pulp or nerve is dead and has been removed; therefore it is not a dead tooth.

The problem then resolves itself into the possibility and practicability of sterilizing the tooth and contiguous tissues, keeping them sterile, and at the same time avoid trauma or chemical injury. The solution of this problem lies between the laboratory and the clinician, and while still in a state of controversy, the weight of clinical as well as research evidence is that the solution can be found. Of the more recent reports, while not final, that of Rickert of Michigan is most favorable.

This is not a question which concerns the dental profession alone, but should receive the sympathy and cooperation of the medical profession as a whole.

The problem of evolution will probably never be solved to the satisfaction of all, but it would be absurd for the world to cover its head and quit following the leads that appear. It would be more absurd for the science of healing to "lay down on the job" which is of such vital concern to humanity.

SURGERY

A. E. BAKER, SR., M.D., *Editor*
Charleston

COMPLICATIONS FOLLOWING ABDOMINAL OPERATIONS

The surgeon's work and responsibility are only partly done when he has finished operating. Often much more judgment and broad surgical qualification is needed in early recognition and interpreting adverse symptoms than that of possessing the knowledge of mere operative technic. "The surgeon who is an excellent operator but an indifferent post-operative fighter, will probably lose more patience than the indifferent operator who is a hard and efficient post-operative fighter. blessed is he who fortunately possesses both qualifications."

In serious abdominal cases it can not be emphasized too strongly the importance of

the surgeon giving personal attention to post-operative directions. Many a cleverly performed operation has passed into death through faulty and inefficient after treatment. There is too great a tendency to "operate and get out, rather than operate and stay about."

Constitutional conditions must be met, functional and organic, as well as the accidental infections.

The uncomplicated healing of the incision following a surgical operation is the ideal to be wished for but not always attained, which is most often due to trauma to the wound tissue during the operation, interference with the blood supply of the tissues by too tightly drawn sutures, leaving devitalized tissue in the wound, burying large amounts of heavy suture material, lack of careful hemostasis and failure to obliterate dead space. These conditions bear greatly on the subsequent healing of wounds.

Post-operative vomiting produces abdominal contractions and venous congestion, which may cause bleeding from small vessels which have not been ligated. As a result of this, hematomas may develop and dead spaces which may be present in the wound may become filled with serous exudate. With the constant possibility of these conditions wound complications should be suspected early if the patient has fever and complains of tenderness in the wound.

Almost all complications in abdominal wounds occur in the tissues lying above the fascia. The symptoms in such cases usually begin from five to eight days after operation, although they may develop later, depending on the type of infection in the wound and whether or not the condition is due to a hematoma or to a collection of serum.

Dilatation of the stomach following abdominal operation is more common than was formerly supposed; if discovered early it may not be serious. If patients are not doing well, even if they do not complain of the stomach, a tube should be passed. Should there be dilatation caused by paresis, the stomach should be emptied every few hours by gastric lavage until relief is obtained. If not relieved the abdomen should be opened, kinking and other mechanical defects, if found, rectified, after which gastro-enterostomy is usually indicated. Pituitrin and other drugs have been advised but are practically

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Peritonitis occurring after an operation and further operation inadvisable, the opium treatment is worthy of consideration. Alonzo Clark reduced the mortality of peritonitis by the use of opium. Later Crile explained the mechanism of its action, and showed that during the "period of acute toxic struggle" it performs two important functions. It inhibits peristalsis, and it protects the patient from the shock, the nerve depression, and loss of energy. Crile advocates reducing the respirations to 12 or 14 per minute. With the patient narcotized and rendered immune to the nervous shock of the disease, the intestine quiet, and water given freely by rectum and hypodermoclysis, the fluid balance maintained, a large proportion of cases once regarded as hopeless may be saved.

The treatment of acidosis can be expressed in two words: water and alkalis; the one hastening elimination of the acids and the other neutralizing them. Soda bicarbonate is the simplest and best alkali. If not retained by mouth it is best given by rectum. Subcutaneous administration may produce irritation and abscesses.

Urinary retention after operations has been a source of much concern to both physician and patient. The usual remedies, as a rule, fail, and catheterization, with its ill effects, is resorted to for a week or more.

In the last three years urotropin has been given intravenously in the German, French, and English clinics to relieve bladder retention.

To quote from a recent paper on "Intravenous Urotropin in Post-operative Urinary Retention," by Dr. Baker, jr.: "In an effort to determine the efficiency of this treatment I have collected a series of one hundred consecutive post-operative cases at the Baker Sanatorium in which urotropin was not used as compared with a series of like cases in which urotropin was administered. These cases were ones upon whom abdominal, perineal and rectal operations were performed, as these are the cases that most frequently require catheterization. The series of one hundred cases which did not receive urotropin, 59% required catheterization, whereas in the series in which the urotropin was given, only 8% necessitated catheterization, and of this 8% of cases 6% urinated spontaneously after

the second dose, and the other 2% after the third dose. Every case therefore finally responded."

ORTHOPEDIC SURGERY

O. L. MUIR, M.D., *Editor*

Charlotte

AMERICAN ORTHOPEDIC ASSOCIATION

From April 26th to 28th the American Orthopedic Association was in session in Atlanta. The present President of the Association is Dr. Michael Hoke and the pilgrimage of this scientific body to Atlanta was a distinct compliment to Dr. Hoke's work. It is the first time this Association has convened south of Washington and it is gratifying to Dr. Hoke's friends to see the present day interest in orthopedic surgery focusing on his clinics. These clinics have produced much constructive work and have been the entire inspiration of the great Shriners movement in the interest of crippled children.

The first day of the meeting was taken up with demonstrations of post-operative cases of infantile paralysis, chronic arthritis, flat-foot, scoliosis and osteomyelitis, and the demonstration of braces and other apparatus in common use in the local clinic. Scientific papers by various members of the Association occupied the time during the second and third days of the meeting. The attendance was unusually large and representative, with men from Canada, the States and Australia.

From the clinics in various parts of the country we find progress being made on various problems. Baer of Baltimore and Campbell of Memphis are successfully mobilizing many ankylosed joints. They seem to lead the field in this. Hibbs on the other hand is accomplishing wonders fusing tubercular joints and the spines and knees of certain paralytic cases. The subject of arthritis had its inning with nothing particularly new brought out. Burbank of New York feels that his vaccine therapy is meeting the situation, while others were equally enthusiastic over protein poisons as a cause of certain obstinate types, and protein control the cure. Henderson of the Mayo clinic read on the role of certain blood chemistry in connection with ununited fractures. This will come out in detailed publication in the *Journal of Bone and Joint Surgery* during the coming year,

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PEDIATRICS

FRANK HOWARD RICHARDSON, M.D., *Editor*
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It is becoming more and more the custom for those three important agents of child welfare,—the parent, the doctor, and the teacher,—to work in concert toward their common end, the good of the child. There was a time when the doctor's job consisted exclusively in treating the child when he fell sick; the teacher's, in imparting a certain amount of "book larnin" to him; and the parents, in doing whatever else had to be done for him. With the advent of preventive medicine, however, the doctor's job was increased—and he had the added duty of administering preventive inoculations. The nutrition of his little patients was next added to his duties. And then, equally important, came the further task of conserving the mental hygiene of such children as came under his care.

Loyal as we doctors wish to be to our own profession, we shall have to admit that had it not been for the efforts of the teachers, the principals, and the normal school authorities, we should be much farther back in all three lines than we are today. Too often it has been the doctor who demurred when the school authorities asked for preventive inoculations; for medical supervision of the undernourished child; and even for help in the evaluation of the handicaps of the "problem" child.

We are coming, however, to the time when both doctor and school principal are keenly alive to the best interests of the child; and are alert to do everything in their power for him, irrespective of which one of them happens to get the credit for initiating the particular step in advance. A close co-operation in the matter of preventive inoculations is now customary; rather than rare; whichever first detects malnutrition, is sure of obtaining the team work with the other necessary to overcome it; and the study of the mental hygiene of the problem child—and what child is *not* a "problem child?"—is now beginning to enlist the interest of both. The parent is beginning to have to "watch his step," for fear lest he may lag hopelessly behind these

two coadjutors of his.

Occasionally an apparent obstacle to this *entente cordiale* develops—apparent, not real; for it needs but the least bit of forbearance on the part of each, to have this appearance disappear permanently. This bone of contention is the question of the long school day. Why is it not a real obstacle?

It was noted recently in this column, that the five or six-hour day was hopelessly over long for the average young child. It would have been fairer, had mention been made of the apparent paradox—namely, that here is visible a tendency on the part of some of the foremost educators to *lengthen* the school day! How can these two statements be reconciled? Perfectly easily. In the Brooklyn Ethical Culture School, for example, even the beginners' class has a school day lasting from nine until three,—if desired by the parents, until four! How can the writer, who is medical adviser to this school, consent to this? In the first place, the school is a fresh-air school,—not in theory, but in actual practice, with breeze-swept class-rooms, and a beautiful park but thirty feet distant, where much time can be spent. Dinner is served in the school; and following this well-balanced meal comes an hour's rest (sometimes sleep) in the open air, on army cots, each child in his individual sleeping bag. In the second place, hand work, music, etc., constitute the afternoon's work; and much of the morning is occupied by similar activities.

It is easy to see that in such a school, the longer day is far less exhausting than the same amount of time would be, if it were devoted to keeping the youngsters amused in the average city apartment, or on the average congested street. Quite similar is the case of the modern "country day-school," where the city boy goes in the morning, returning at night after a long day spent largely in the open air of the suburbs.

It can readily be seen how different is the tendency to the long school day in such environments, than would be a tendency to lengthen the hours of confinement in the typical primary school! Here hurried lunch, crowded rooms, indoor air (no matter how much ventilation is stressed) and the intellectual curriculum, unrelieved by manual subjects, combine to produce conditions such that it has become a pre-requisite to the cure

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of malnutrition in the average school-child, that his day in the average or even the better-than average school, be materially reduced. The experience of such workers as Dr. Wm. R. P. Emerson, Tufts University Medical School; Dr. Charles Hendee Smith, Bellevue Hospital and College of Physicians and Surgeons; and Dr. Wm. Henry Donnelly, New York Post Graduate Medical School, and a score of others, corroborates this. Columbia University's Teacher's College has such a short-day-schedule, not only at Lincoln School, its experimental school; but as well at Horace Mann School, which, as is well known, is *not* an experimental school at all, but one in which approved pedagogical methods are demonstrated.

It is to be hoped that the interest being shown in increasing degree in school problems, may eventually result in the creation of a school so ideal in all ways that the child will be far better off here than in any but the most exceptional home. It is no disloyalty to express openly, however, the conviction shared with practically all educators, that the average school of today has a long way to travel before it reaches such a point. Meanwhile it is not too much to ask parents, teachers, and physicians to temper the wind of present day school conditions to the shorn lambs that make up our school population. Any teacher knows, and if free to express an opinion will voice her conviction, what a heaven would be hers, and what a millenium of curricular accomplishment would be on its way, were she to be given half of her crowded class room for three hours of work in the morning; and the other half for a similar period in the afternoon!

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

DOCTOR AND PATIENT

"Medicine and the doctor have come into being as a result of the law of supply and demand. The demand has arisen as the result of man's desire to go on living, his wish for immortality, and his demand has been met by the birth of medicine and its incarnation in the doctor. This might be illustrated in many ways, but the most obvious illustration is the existence of laws that provide pun-

ishment for the doctor if he fails. Man not only wishes to go on living, but he will not even acknowledge death as a necessity if he can help it, and so bolsters up his faith in his ability to ward it off by punishing the man temporarily intrusted with this power if he fails."

I quote from a contribution to Mental Hygiene for January, 1926, in an article by Dr. William A. White entitled "The Dynamics of the Relation of Physician and Patient." The thesis is presented with Dr. White's usual clarity and forcefulness and I wish the readers of this journal might all be able to make a study of it.

In health as well as in sickness two streams of energy, working more or less in opposing fashion, are at work. The desire to live and to succeed represents the energy-stream that is more active when things are going well, but even in the best state of being there are always discouragements and drawbacks which represent the energy-force at work in the contrary direction. In sickness this latter force is in the ascendancy, and to help in opposing it the doctor is called in to see the patient. "The balance toward health is never so overwhelming that it may not be reversed, and, once reversed, its tendency is to stay reversed. Illness tends to mobilize all the tendencies that lead in the direction of degradation of energy and to the final outcome in a state of equilibrium in death. The object of therapy, from this point of view, is, therefore, to recapture the energy that is flowing in this direction and turn it into useful work in the opposite direction."

The desire to continue to live constitutes the most fundamental dynamic force with which the physician must work. This relation existing between patient and doctor represents the medium through which all medication of every kind must flow to the patient, and without this relationship there can be no hope of any of the medical man's skill being of any avail.

Individuals differ enormously in their make-up with reference to the relative force of these two opposing streams of energy referred to a little while ago. A certain type of person with whom we doctors are all acquainted is constantly being pushed by his stream of energy down into relative ill-health. Such a man or such a woman feels constantly

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unfit and inadequate, uncomfortable, unhappy, and doubtful of any degree of success. Daily living constitutes a daily struggle against the tendency toward degradation. Such a person hungers for help, for the help of a physician, such a physician as will array his wholesome and boundless energy against the individual's downward trend, and in alignment with the person's latent desire to be well and strong and successful. Quite another type of individual whom we all rejoice to know is the person all of whose energy seems to be directed in the upward push into sound health and optimism and happiness along the thoroughfare in the direction of success. But even in such a person when disease alights the forward-pushing energy-stream is opposed, the contrary tendency in the direction of degradation gets the upper hand, and the doctor is needed in such an emergency to send his force against the downward tendency caused by the disease process.

"In the first place, we have seen that the patient feels toward the physician much as a little child, looking up to him as a source of great power and helpfulness in his extremity and trusting in him to bring him through. On the other hand, the attitude of the physician toward the patient is the obverse of this. He accepts the role thrust upon him and tends to believe in himself and in his power to accomplish that which is expected of him. These attitudes, let it be understood, are quite unconsciously assumed by both, and largely because of that fact any failure in the desired result is apt to be as unacceptable to one as to the other; per contra, success tends to support the belief in the correctness of the roles projected by each on the other and assumed willingly for opposite reasons. The patient is willing to assume the role of child because that relieves him of all responsibility and puts it on the shoulders of the physician; the physician assumes the role of omnipotence because that flatters his vanity and feeds his will to power. ***** The patient is generally quite willing, because of his trust in the physician—and perhaps because of his secret sense of cleverness in having chosen him—to believe that he was cured by the particular drug administered by the physician,

and the physician is equally convinced that he cured the patient by the means he chose to apply. Thus it has come to pass in the annals of medical history that every therapeutic measure has at one time or another been credited with the cure of almost every human ill, a state of affairs that will go on repeating itself as long as the factors involved remain unconscious."

White does not say so, but all of us know that out of the strong desire to be well and the belief that a human agency exists somewhere adequate to bring about personal restoration springs the so-called quack, full-panoplied, and supplied with medical omniscience and omnipotence. The physician's most devoted worshippers are amongst the ignorant. The spread of medical knowledge tends always to lessen the prestige of the doctor. Those who are educated especially in the sciences related to medicine know how limited is the most learned physician's knowledge, how impotent he is in so many situations, how futile are his efforts to ward off the approach of Death in so many directions. The hold of the quack and the sure-cure medicine-man on the ignorant can not so well be broken by ridicule as by teaching the people even how little the best trained doctor knows. The physician who claims to perform miracles has no standing today amongst trained physicians; the miracle-worker is potent only amongst the ignorant. Etymologically, a miracle is a phenomenon which excites wonder, and the object or the event is wondered at only because of the ignorance of the causes which brought it about in the mind of him who beholds it. Science knows no mysteries. The diffusion of scientific knowledge will drive the miracle-worker whether he be ecclesiastic or physician, off the stage of human action. A human being constitutes a unit in which two elemental forces are constantly striving each against the other. The energy operating in one direction would tend to keep him alive forever; energy operating in the other direction would tend to bring him down to death. The wise physician is he who is able to know how to add his strength to the one force and in opposition to the other.

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UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*

Charlotte

PROSTATITIS ACUTE, CHRONIC, PROSTATIC ABSCESS

Prostatitis is an exceedingly common condition and is seen almost as frequently as urethritis. The above infection often becomes a very painful and distressing disease. It is usually not primary but secondary to gonorrhea or to some other infection of the urethra or upper urinary tract. The organisms usually found invading the prostate are the gonococcus, the staphylococcus albus and the colon bacillus. The colon bacillus or the staphylococcus albus may be found without any evidence of a like infection anywhere else in the body, but there is no absolute proof of a hematogenous infection except in conditions like pyemia.

For some unknown reason acute prostatitis complicating gonorrhea or complicating a non-gonorrheal urethritis often goes unsuspected until the patient develops symptoms of marked dysuria. In the presence of an acute infection the prostate gland becomes congested, edematous and swollen; the interstitial prostatic substance becomes packed with polymorphonuclear leucocytes and if swelling becomes sufficient to encroach upon the prostatic urethra, urination becomes very difficult or complete retention occurs. The acute inflammation may subside, or a chronic inflammation may follow, or the gland may suppurate; then a prostatic abscess is the result.

The acute inflammation occludes the mouths of the prostatic ducts and communication is cut off between the ducts and the urethra. Abscess formation is many times the result, and the infection usually begins in some area immediately surrounding the prostatic urethra.

When the above is the case the patient develops unmistakable symptoms of obstruction at the bladder neck, and in order to know the condition of the prostate frequent rectal examinations must be made in cases of urethritis and upper urinary tract infection without any attempt at manipulation or massage.

When we consider the very large number of anterior urethral infections that may lead

to posterior urethritis we can conceive of how common a chronic prostatitis must be, and I believe we are greatly concerned with the degree of the infection and the organism causing it. Here again men depend on the stained smear of the prostatic secretion for a diagnosis. This method, however, is not reliable. The prostatic secretion, cultured, will often show the organism when it cannot be demonstrated in the smear.

The treatment of acute prostatitis and prostatic abscess is palliative and surgical. In our hands absolute rest in bed, vesical and rectal sedatives, and hot rectal irrigations are of great importance, but very often do not entirely relieve. Intravenous mercurochrome, metaphen and similar drugs are of value and will temporarily relieve pain and urinary obstruction. Our experience is that the cases we can make rupture into the urethra and in this way drain do better than the cases we open extraurethrally. While we have not used Keyes' method of breaking into the abscess with a sound, we believe it of value in certain cases.

The treatment of chronic prostatitis is absolutely unsatisfactory in the deeply infected prostate gland and it is in this type case we are expecting much from chemo-therapy in future years.

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AMERICAN PHYSICIANS FOR EUROPE

Bookings are now coming in rapidly for the second section of the Inter-State Post-Graduate Clinic Assemblies of North American Physicians in Europe, of which Dr. William Peck, of Freeport, Ill., is director and Dr. A. J. Crowell, of Charlotte, N. C., assistant director.

Dr. Crowell has recently returned from New York, where he had a conference with Dr. Peck and, incidentally, saw the first section off for Europe. This party sailed April 27th, with more than a hundred doctors, their families and friends. Dr. Peck will make arrangements while on this tour for the clinics and social entertainment of the second section, which will be as good in every way as that provided for the first party.

It is Dr. Crowell's plan to divide the clinics into groups, so that men interested in a special line of work may see that work and not be burdened with attending clinics on subjects in which they have not so great an interest.

The second trip has been arranged especially for the benefit of southern physicians, who like to take their vacations during the warm weather, and for medical teachers who can leave after their finals and return before school opens. However, every section of the country will be represented and reservations have already been received from the middle west and as far north as Canada.

Dr. PAUL WHITE, of Boston, was the guest of the Mecklenburg County Medical Society at a special meeting held at the Presbyterian Hospital, Charlotte, May 11. Immediately before the meeting, at which phases of cardiac disease were presented, Dr. White conducted a clinic in which subjects of heart pathology were demonstrated.

It so happened that Dr. White was a member of the same medical unit organized in Charlotte for world war service by Dr. Brenizer, which lent an opportunity for a reunion dinner tendered by Dr. Matheson at the Charlotte Eye, Ear and Throat Hospital on the evening of the 9th.

The programme of the MECKLENBURG COUNTY MEDICAL SOCIETY's regular meeting

on the evening of May 4 embraced Treatment of Hemorrhoids by Diathermy, Dr. L. D. Walker; reports of the A. M. A. meeting in Dallas, Drs. Ashe, Crowell, Johnston, Laferty, Munroe, Strong, Wakefield and Whisnant; and Dr. Pressly's review of Cushing's "Life of Osler." The discussion of the last paper brought forth expression of regret that the great men in medicine and in other fields in our own South were so neglected, and placed the blame on ourselves.

Dr. HAMILTON W. MCKAY was elected president of the Charlotte Rotary Club to assume office May 1.

LAKEVIEW HOSPITAL, Suffolk, Va., wishes to inform her medical patronage that Dr. J. E. Rawls, a member of her surgical department, sailed for Europe April 27th, to attend clinics abroad and will return in July, 1926.

As heretofore, Dr. W. T. Gay, junior member of her surgical staff, will take care of general surgery in his absence.

Dr. Rawls accompanied the Interstate Post-Graduate Assemblies of North American Physicians, the chief executive of which is Dr. Chas. H. Mayo, of the Mayo Clinic.

Dr. A. RHU, F.A.C.S., retiring president of the Marion County Medical Society, Ohio, in his address delivered January 5, 1926, gave voice to some interesting data.

He said: "Permit me to call your attention here to the following recent statistical facts: Seventy-five per cent of medical men who undertake to practice, fail. Today \$750 per annum is the average income of a medical practitioner."

THE LAURENS COUNTY MEDICAL SOCIETY, in regular session, unanimously passed the following resolution upon the departure of Dr. Chas. P. Vincent, for his new field of work at Sanford, Florida:

Whereas, Dr. Chas. P. Vincent, who has been an active member of the Laurens County Medical Society for the last twelve years, has chosen Sanford, Florida, at which place he will continue the practice of his profession,

Be it resolved that this vicinity regrets his departure and wishes for him that success in

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RICHMOND, VA.

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Surgery and Gynecology

J. S. Horsley, Jr., M.D.,

Surgery and Gynecology

Wm. H. Higgins, M.D., Internal Medicine

O. O. Ashworth, M.D., Internal Medicine

Austin I. Dodson, M.D., Urology

Fred M. Hodges, M.D., Roentgenology

Helen Lorraine, Medical Illustration

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his new home that energy, popularity and promptness made for him here. We therefore commend him to his new community as eminently qualified, diligent and experienced and bespeak for him that success which always is the outgrowth of merit.

Resolved, second, that a copy of this resolution be forwarded the Medical Society of Sanford, a copy be sent to his family as well as published in the local papers of Laurens, S. C.

W. D. Ferguson,
T. L. W. Bailey,
Rolfe E. Hughes,
Com.

Laurens, S. C., April 5, 1926.

Whereas, the LAURENS COUNTY MEDICAL

SOCIETY realizes with deep regret the death of Dr. Chas. E. Rogers, one of its oldest and most beloved members,

Be it resolved that in the passing of Dr. Rogers this society has lost a warm supporter and friend, the profession a valued physician and the public a gentleman of the highest type. We therefore unanimously extend the deepest sympathy to his family, appropriate a page in our record book to his memory and ask that the local papers publish this appreciation of his colleagues.

T. L. W. Bailey,
W. D. Ferguson,
Rolfe E. Hughes,
Com.

Feb. 22, 1926.

CORRESPONDENCE

Dear Doctor Northington:

The tentative plans for the State Society meeting will include the Oceanic hotel, Wrightsville Beach, as headquarters, and with meetings of sections also in the Seashore hotel, Wrightsville Beach. Any overflow of committees can possibly be accommodated in the Auditorium at Harbor Island. This space will amply provide for all sections and committee meetings. There are three hotels on Wrightsville Beach, namely, the two above mentioned and the Hanover Inn. Accommodations in each can be now secured by direct communication, and as we expect and hope for a large attendance it is very desirable on

the part of those who expect to come, to make reservations at once.

There are many excellent boarding houses, of which a list will be available at the registration desk at the Oceanic hotel. In Wilmington there are the Cape Fear, Wilmington and Orton hotels, respectively.

The profession and citizens of Wilmington are looking forward with the greatest pleasure to welcome the Society meeting at Wrightsville Beach and are attempting in every way in their power to make this meeting a success in every way.

Sincerely yours,

J. G. MURPHY,
Chairman Committee on Arrangements,
Wilmington, N. C.

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Archibald E. Baker, M.D., F.A.C.S.

Surgeon in Charge

Archibald E. Baker, Jr., M.D.)
Barnwell R. Baker, M.D.) *Associates*



REVIEW OF RECENT BOOKS

THE BACTERIOPHAGE AND ITS BEHAVIOR, by F. D'Herelle, M.D., Directeur du Service bacteriologique du Conseil Sanitaire, Maritime et Quarantenaire d'Egypte, translated by George H. Smith, Ph.D., Associate Professor of Bacteriology and Immunology, School of Medicine, Yale University. \$8.00. Published by The Williams & Wilkins Company, Baltimore, Md., U. S. A., 1926.

"Fleas some eminent scientists say
Have other fleas that upon them prey,
These have other fleas to bite 'em,
And so proceed *ad infinitum*."

Certainly few of us who as children repeated this bit of doggerel had any real idea that it was, in its essence, true; but the author of this volume has adduced incontrovertible evidence that there is such a thing in the invisible (by present methods at least) world as a bacteriophage, an eater of bacteria.

The observations which led to the formulation of the hypothesis, the methods of investigation, the passage to theory and the final establishment of fact, are all of absorbing interest.

The relative resistance of different bacteria, the ubiquity of the bacteriophage, its behavior in disease and epidemics;—all these but suggest the potentialities which may inhere in this line of investigation.

THERAPEUTICS, MATERIA MEDICA AND PHARMACY. The Special Therapeutics of Diseases and Symptoms, the Physiological and Therapeutical Actions of Drugs, the Modern Materia Medica, Official and Practical Pharmacy, Prescription Writing, and Antidotal and Antagonistic Treatment of Poisoning by Samuel O. L. Potter, A.M., M.D., M.R.C.P., Lond., Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco; Author of the "Quiz-Compend of Anatomy and Materia Medica," "An Index of Comparative Therapeutics," Several Articles in Potter's "Practical Therapeutics," and "Speech and Its Defects." Fourteenth edition, revised by R. J. E. Scott, M.A., B.C.L., M.D., New York, Fellow of the New York Academy of Medicine; formerly Attending Physician to the Demilt Dispensary; formerly Attending Physician to the Bellevue Dispensary; Editor of "Witthaus' Text-book

of Chemistry," "Witthaus' Essentials of Chemistry and Toxicology," "Hughes' Practice of Medicine," "The Practitioner's Medical Dictionary," Gould and Pyle's "Cyclopedia of Medicine and Surgery!" "Pocket-Cyclopedia of Nursing;" etc., etc. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street. \$8.50.

It is made clear that mention of a drug does not imply endorsement. An old convenient classification is used, and in each list may be found remedial agents in great number. The arrangement is alphabetical which is a time-saving feature.

The animal extracts are considered worthy of careful investigation. Belladonna is said to be one of the most valuable agents in the *materia medica*. Chloral hydrate is rightly given a high rank among hypnotics. Electrotherapeutics is given consideration and it is said that electricity is being more used in treatment than ever before.

A great number of drugs are described and the reader has to choose with little direct indication as to which is best.

There is a considerable section containing information on pharmacy which should be of interest to every doctor.

Part III is devoted to Special Therapeutics, in which, surprisingly, we find a treatment for alopecia. Many drugs are listed, and their method of administration given, under each disease or symptom, a feature of value in obstinate or unusual cases.

An appendix gives many Latin words and phrases and the U. S. Anti-Narcotic and Prohibition Regulations.

A MANUAL OF HYGIENE AND SANITATION, by Seneea Egbert, A.M., M.D., Dr. P.H., Professor of Hygiene, University of Pennsylvania, Formerly Professor of Hygiene, and Dean of the Medico-Chirurgical College; Sometime Major, Medical Corps, U. S. Army; Fellow of the College of Physicians of Philadelphia; Member of the American Medical Association, American Public Health Association, American Association for the Advancement of Science, etc. Eighth edition, enlarged and thoroughly revised. Illustrated with 154 engravings and 4 plates. \$4.00. Lea & Febiger, Philadelphia and New York, 1926.

This new edition of a standard work has been revised in accordance with the most recent developments in sanitary science.

A clear exposition of the "germ theory" is given, which is understandable to the laity. The modes of transmission of disease,—by insects and various other agencies,—are described in detail.

The chapters on ventilation and heating, food, disinfection, and tourist and vacation hygiene show marked changes in ideas of modern sanitarians.

This book—besides meeting the needs of doctors and students of medicine, would serve much better as a high-school textbook than do most of those written exclusively for that purpose.

HANDBOOK OF DISEASES OF THE RECTUM, by Louis J. Hirschman, M.D., F.A.C.S., Ex-chairman, Section on Gastro-enterology and Proctology, A.M.A.; Ex-President American Proctologic Society; Professor of Proctology, Detroit College of Medicine; Proctologist, Harper and Woman's Hospitals; Consulting Proctologist to Detroit City Receiving, Evangelical Deaconess, Wayne County Hospitals, etc., Detroit, U. S. A. With two hundred fifty-two illustrations, mostly original and five colored plates. Fourth edition, revised and rewritten. \$6.50. St. Louis, The C. V. Mosby Company, 1926.

Proctology is attracting more attention now than ever before, even when operations for hemorrhoids and hernia made the whole of the surgery of the intestinal tract.

Different chapters are devoted to anatomy, symptoms which should call attention to the rectum, the technic of local and sacral anesthesia, and to most of the common diseases of this locality.

The text is clear, the evidence well arranged and the conclusions convincing.

MODERN METHODS OF AMPUTATION, by Thomas G. Orr, A.B., M.D., F.A.C.S., Professor of Surgery, University of Kansas. One hundred twenty-five illustrations. \$3.50. St. Louis, The C. V. Mosby Company, 1926.

There is an orderly progression from general considerations to special methods. Amputations in the upper and lower extremities

are carried from fingers and toes to shoulders and hips.

Such vitally important matters as amputation stumps and artificial limbs and their fitting are well deemed worthy of much space.

There is an enthusiastic chapter treating of "cinematographic amputations" which have to do with such a treatment of the stumps as to "make possible the direct transmission of voluntary movement from the stump to the artificial limb." It is stated that much work along this line has been done in Italy, in Germany and in South America and many surgeons of note are enthusiastic converts.

Gould and Pyle's **Pocket Cyclopedic of MEDICINE AND SURGERY**, based upon the fourth edition of Gould and Pyle's *Cyclopedia of Practical Medicine and Surgery*. Third edition, revised, enlarged and edited by R. J. E. Scott, M.A., B.C.L., M.D., New York, Fellow of the New York Academy of Medicine; formerly Attending Physician to the Demilt Dispensary; formerly Attending Physician to the Bellevue Dispensary; Editor of "Witthaus' Text-book of Chemistry," "Witthaus' Essentials of Chemistry and Toxicology," "The Practitioner's Medical Dictionary," Hughes' "Practice of Medicine," Gould and Pyle's "Cyclopedia of Medicine and Surgery;" "Pocket-cyclopedia of Nursing," etc., etc. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street.

As a means of ready reference to brief accounts of things medical and a table of doses and solubilities, this volume is one of great usefulness, since it includes information on most of the terms and drugs recently introduced.

THE SURGICAL CLINICS OF NORTH AMERICA, February, 1926, Volume 6, Number 1, Philadelphia number, Philadelphia and London, W. B. Saunders Company.

This number concerns itself with many problems of unusual interest. Among these are spinal anesthesia, a new operation for aneurysm, relaxed abdominal walls, intra-abdominal adhesions, appendicitis in children, varicose veins, gastro-jejunal ulcer, and a fracture symposium.

Southern Medicine and Surgery

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CHARLOTTE, N. C., JUNE, 1926

No. 6

RELIGION AND SCIENCE

Commencement Oration Before the Class of 1897, Medical College of Virginia*

By

RABBI EDWARD N. CALISCH, Ph.D., Richmond

Sensible of the great honor conferred upon me by having been selected as orator for this evening, I have sought to present an effort equal to the occasion, and I trust that your indulgence will cover the large gap that will be left. In course of preparation, I found some difficulty in trying to get my mind to run out of its usual theological groove, and even now fear that I have not been altogether successful. The two thoughts that came first and uppermost were that, under the present conditions, religion and science had, like Esau and Jacob, become reconciled for at least tonight, and, secondly, that these young men, who are being graduated here, have as physicians so tremendous an advantage over the generation of their predecessors, now passing away. What is true in a general way for all men is specifically and especially true for them.

In a general way, we all of us have much more than our fathers. We are the heirs to the accumulated wisdom of the ages that have gone. The generation of the present is like a dwarf perched upon the giant shoulders of the past, from which vantage ground we look o'er the vista of the centuries buried. Our vision is filled with the monuments of our fathers' achievements that are upreared like mile-stones upon the roadway of the years. And this age has added thereto with an energy that is as wondrous as it is indefatigable. Upon the broad foundations this age has built many-storied and beautiful structures, whose material has been garnered from every corner of the universe. The triumphs of genius and skill are everywhere

manifest. Consider how miles of territory are lighted and bereft of light by the pressure of a button; how man has yoked the lightning to the carriage of his pleasure, to the wagon of his labor; how it is bent to the aid of the eye and the ear and the speech; how it carries the spoken word to the listening ear through miles of hill and dale; how the sun paints our pictures for us and the moon furnishes motive power for our mills; how we have unlocked from Nature's grasp her most reluctant secrets and penetrated the innermost recesses of her being. Our range is through all the realms of space, and the starry worlds are numbered in the tale of our knowledge. The ocean depths are uncovered and the monsters thereof yield their possessions to answer our needs and the calls of our luxury. The bowels of the earth disgorge their treasures and the veins of the mountains give up their riches, while conquering man builds high the palaces of his pleasures, his comfort, and his commerce.

In medicine and surgery the advance has been no less brilliant. When we compare the conditions surrounding the practice of medicine and surgery fifty years ago with those that obtain today we begin to realize what has been accomplished. The discovery of the germ theory has revolutionized both their study and their practice. We who speak so glibly today of anesthetics, inoculation, x-rays, bacteriology, microbiology, ptomaines, and toxins, must remember that, excepting the first two, these things were almost unheard of fifteen* years ago. To compute the benefit that they have wrought is impossible. They have brought pathology from the realm of empirical conjecture to the border land of

*Republished by express permission.

*Note: This address was delivered 29 years ago.

exact science. They have rendered the practice of medicine to be almost a preventive rather than a curative art, for by modern treatment not only this, but coming generations, are spared countless miseries. Says Lecky (*History of European Morals*, Vol. 1, p. 88): "It is probable that the American inventor of the first anesthetic has done more for the real happiness of mankind than all the moral philosophers."

Surgery has kept more than equal pace with the advance of general knowledge. Counteracting the insidious microbe with aseptic cleanliness, the magician of the scalpel can wave his wand and know that healing and blessing will follow, and that, if his preparations have been complete, he need not fear erysipelas of the wound or blood poisoning, nor have to wonder why some wounds will suppurate for weeks and others heal by first intention, nor dread that hospital gangrene will be a Banquo's ghost to haunt his waking hours and disturb the slumbers of the night.

But this progress has not been one of altogether unmixed blessing. There are growing pains, and acquisition in one direction often means concomitant loss in another. The pain here has come in the clash of the new knowledge with old ideas. Theories long established, long followed and endeared by age, are crumbling to ashes. In the rising sun of more accurate information the misty errors of older practice are being driven steadily away. Many persons lament the ruthless iconoclasm of science, and, with a sigh, behold the shattering of mental idols they have so fondly cherished. Especially in the domain of religion do we find this so. Here the conflict between the old and the new has assumed wider proportions, and the interest is intensified for the reason that so many people are affected, feeling that their life's happiness is endangered. Doctrines which inspired our fathers with deep and fervent faith, which were an anchor of hope to them in despair, a rainbow of promise after the flood of despondency, their solace in sorrow and their comfort in pain; these they find threatened with destruction by the new knowledge which attacks the basis on which they are founded.

Man has sat at the feet of the teachers of religion and for centuries has been taught certain theories concerning the world, its

formation, and the period of its life. And for centuries man has received these doctrines as coming from divinely-inspired sources and accepted them as being incapable of error. But the new knowledge has demonstrated that certain of these theories are not and cannot be true. The evidence submitted is ineluctable. It is the evidence of stubborn and unyielding facts that are hewn from the very rocks of the earth and lit up by the lamps of the firmament. Where these conflict with the doctrines set forth, naught but the stultification of the intellect can permit the retention of the doctrines. The men who have sought out and established these facts are not those who will permit the mind to halt between theory and fact, no matter how great the sacrifice involved, how dearly cherished the beliefs which have to give way. It is the proclamation of these truths that has caused terror to many who see untold harm in the destruction of established theological theories. From these the cry has gone forth that science is the enemy of religion, and that men who follow its paths deny God.

This is not so. Science does not conflict with religion, but with theology. It does not deny God, but the dogmatic assertions of men concerning God. As a teacher of religion and of the truths of faith, I stand before these men, who are the followers of science, and I bid them Godspeed in their labors. Open wide the gates of knowledge and let man enter and acquire. Stay him not as he climbs upward. Let not the very firmament oppose his ascent. Let man broaden his understanding till the horizon itself fall back before the mind's triumphal advance, and it will be found that religion, real religion, has been helped and not hindered, that God has been glorified and not denied.

It is true there will be much pain along the path of that progress, for as Amberly says, "It is a condition of progress that we lose something on the way." But it is a divine dispensation that we never incur that loss till we are able to endure it.

Man was religious before he was scientific. Religion has been through the ages the dominating passion of the human race, and much of the history of man is the history of its manifestations. We cannot say that all these

have been for the happiness and peace and blessing of man. Much has been endured, much suffered, and much agonized because men sought forcibly to impose their interpretations of things religious upon the minds of others. We ought to rejoice, not grieve, that the power is given to know the truth, to correct the errors that are manifest, not in God's cosmic plan, but in man's conception thereof, and that in their stead there come to us a grander hope and a more blessed light. For me there is no terror in the doctrine of evolution. If I am assured that we are descended from primordial slime I see no diminution in the majesty of the Creator, no weakening in the omniscience that in the beginning placed there that piece of palpitating protoplasm and gifted it with the possibility of development into the magnificent mentality of scholarly man.

The faithful need have no fear of this greater knowledge. It will be found that science emphasizes not contradicts the genuine lessons of religion. The claims of conflicting theologies may be swept aside, the dogmatic statements of men of all ages, seeking to define the undefinable, may be questioned and denied, but the fundamental principles of all faiths, the existence of an absolute and unknowable essence filling all the universe with the marks of His mercy and His might, have been strengthened by the researches of science.

Thus is science the handmaid of religion, teaching humility and encouraging reverence, and loyal to the truth that shall set us free. Thus is science the burning bush through which God speaks to man age after age. And as man approaches nearer he perceives that he is treading on holy ground. Every department of his knowledge speaks to him of God. Every deeper research shows the omnipresence of the all-puissant first cause. Every newly acquired fact, every newly learned law, every newly understood phenomenon brings him more light from the awe-struck fount of light and life, till his exhausted soul overflows and he calls with the voice of the poet:

"O Thou eternal One, whose presence bright
All space doth occupy, all motion guide,
Unchanged thro' time's all-devastating
flight,
Thou only God, there is no God beside!

Being above all beings, Mighty One,
Whom none can comprehend and none
explore,
Who fill'st existence with thyself alone;
Embracing all, supporting, ruling o'er,
Whom we call God, and know no more."

To you, my young friends, I trust you will permit me to add a word of earnest admonition and along these lines. Yours is a glorious profession, glorious in opportunities and in privileges. It is the safeguard of our progress and, with the ministry, cherishes the souls and bodies of men that they may be better able to answer the exacting claims of an ever-advancing civilization. In the days that are to be you will rise to different heights therein, according as capacity and industry are given to you. Doubtless with the brush of fancy more than one of you has painted a rosy picture of the future, when you will stand at the head of that blessed calling, when your name will be known and honored among men, and the world will lay the tribute of its homage at your feet as it comes for healing and for health. But however high any one or more of you may rise, or howsoever many of you will walk along the path of unrecognized mediocrity, I trust that you all will never cease to be reverent and God-fearing men; that no matter how splend'd your success, no matter how brilliant your achievements, or how you may enrich the world with discoveries you will remember that yours is after all but a single twig upon the great tree of knowledge whose roots run deep into the soil of God's eternal truth.

That you will be God-fearing will be of value to you materially and morally. People are never so prone to be religious as when illness seizes them by the heels. "When the devil is sick the devil a monk would be." Often lips that never praise do supplicate. If a patient whose mind is troubled knows that his physician is one to whom he can pour out his heart and find a sympathetic listener it will be a great comfort to him. And I need not tell you the value of cheerful mental condition to those who are ill.

Secondly, your profession has responsibilities as great as are its privileges. A physician's knowledge of the life of his patients must be a sacred trust, for it is searching and intimate. Reputation is what men hear about

us. Character is what God and our family physician know about us. When we consider the confidences reposed in him, the hidden springs of life that are disclosed to him, the trust that is placed in his honor by wives and maidens, we may well realize that a physician must be a man of sterling moral strength, for he has to meet more temptation in a month than the average man has in a lifetime. For this he must be a devout and

God-fearing man. The scoffer has no enduring wall of strength. The shield of righteous power is given by trust and faith in that God before whom all men must be holy, for He is the perfection of holiness.

That you all may be strengthened and fortified in your life's work, that your years may be many and long, and full of peace and honor, for yourselves and your kindly, cherishing alma mater is my earnest prayer.

THE INTERNIST AND THE GENERAL PRACTITIONER IN THEIR JOINT MANAGEMENT OF CARDIO- VASCULAR-RENAL DISEASE

J. HEYWOOD GIBBES, M.D., Columbia

Whatever the explanation may be, the incidence of the clinical syndrome that is commonly designated by the term cardiovascular-renal disease is extremely high, especially in the fifth and sixth decades of life. It is a condition which carries with it discomfort, limitation of activity, incapacity, or death, the one or the other depending upon the severity of the disease or the care with which the patient is informed about and guided through the dangers which surround him. The victim of this disorder needs frequent and detailed medical counsel regarding almost every phase of his life, and the best that we have to offer is none too good to help him. In attempting to outline optimum conditions for the management of this class of patients, the role of the internist and that of the associated general practitioner must be carefully determined, for each has his function, and both are indispensable to the welfare of the patient.

The frequency of cardio-vascular-renal disease may be indicated by a survey of my office records which show that in 4,647 cases hypertension was found in 301, an incidence of 6.5 per cent, chronic nephropathy in 345, 7.4 per cent, and arteriosclerosis in 356, or 7.6 per cent. The importance of this subject is immediately apparent.

In this day of attempted scientific exactness in clinical medicine we are too likely to be discouraged when we find ourselves unable

to think precisely or to act exactly, especially when we are concerned with matter of therapy. As a result of a mass of experimental work, laboratory investigation, and clinical data, we know a great deal about the etiology of chronic renal disease, arterial degeneration and arteriolar changes, hypertension, and the myocardial disorders of structure and function that occur as secondary manifestations. The picture is in no sense complete, but we have made sufficient progress for encouragement. Of the underlying pathology, we have all but a perfect knowledge; while year by year we have come to know more and more of the alterations in physiology that are brought about by the pathology.

These considerations warrant stratification. But the treatment of these conditions is not so satisfying. To those who take the trouble to inform themselves, its principles are clear, the indications definite, and the results, in many instances, pleasing. In no instance is the rationale of therapy more dependent upon a thorough diagnostic study, using this term in its broadest sense to include a delving into the hereditary background of the patient, a study of his temperament, environment, and responsibilities, an investigation of his tissue changes, and a careful appraisalment of his organic functional derangements. After such a survey loads may be lifted, irritating influences in the body and the environment may be removed, excesses may be checked, and

embarrassed organs may be permitted to do their work under conditions that are no longer embarrassing. But to expect too much is to court discouragement. In many cases the tissue changes are too far advanced to permit of functional readjustment, and our efforts at management are doomed to failure. We can not renew vital tubing, replace damaged organs with new ones, or restore the integrity of impaired tissue; we can bring about readjustments that will transform inadequate function to adequacy, promote comfort and prolong life. Honest thinking and plain dealing between physicians and between physicians and patients will prevent misunderstandings and disappointments.

Every patient with a cardio-vascular--renal disease should be given the advantages of a detailed diagnostic study. This brings him into the domain of the internist, a physician who has fitted himself for estimating even minor changes in the structure and function of organs and who has qualified himself to use or interpret the results of the instruments and methods of precision that have found their way into clinical medicine. The internist should, above any other specialist, recognize the need of assistance from medical men engaged in other fields of work, and he can serve the best interest of his patients only by using such collaboration to the fullest extent. When the general practitioner refers such patients to a worker in internal medicine, he should have confidence, not only in the worker himself, but in his judgment of the need for and the selection of his consultants in other fields.

The investigation should begin with a detailed history of the patient's life, including a family and marital history, a scrupulous enquiry into his habits of living and working, a review of his past illnesses, and a full collection of symptoms relating to the present illness. In this connection, the general practitioner should furnish a written statement of what he knows about the patient, past and present.

A detailed physical examination, including the routine laboratory studies of the urine, blood, stool and Wassermann reaction is next in order. An examination of the eye-grounds and of the prostate gland should be made in every case. These constitute the minimum requirements of a preliminary survey.

When this is done the internist is in a position to determine the need for what we might term special examinations, e. g., roentgenographic and roentgenoscopic investigation of the heart and the aorta, functional test of the kidney and heart, blood chemistry, determinations of the salivary urea, and in seeking aid from other special workers. It will be seen that such an investigation requires time, several days at least, and the accuracy of the findings will be greatly enhanced if the patient can be had to spend this time in a hospital where careful observations and records can be made. In fact, I am quite convinced that no entirely satisfactory estimate of a cardio-vascular-renal case can be arrived at without having the patient in a hospital for observation.

The period which is used by the internist for the observation of these patients drifts indiscernibly into the period of treatment. The rest in bed, the studies of fluid intake and output, the reactions to the ingestion of salt, and the determination of the fluctuation in blood pressure under varying conditions combine the activities of diagnosis and therapy. But the internist should be allowed a minimum of two weeks following his formal investigations to try the effect of what he considers an optimum regime on the functional come-back of the patient. Only in this way can he arrive at an intelligent estimate of what the patient should be permitted to undertake in his home surroundings.

At the end of such a period of study and observation the internist should furnish the patient with carefully prepared written instructions, summarizing the findings in his case in such a way as to show him the reasons for the limitations imposed, and giving him detailed information regarding his diet, his fluid intake, the need for saline purgatives, the amount of exercise and rest that he is to take, and the extent of his business activities. This letter of instructions should be gone over with the patient so that he may be given the opportunity of asking questions and requesting an elaboration of any of its features.

The general practitioner should expect a full report from the internist of his findings in each case, including a copy of the letter of instructions to the patient. In this way he profits from the special knowledge of the

internist, learns the applicability and significance of certain examinations, and is given the opportunity of deciding as to whether the investigation of his patient meets with his approval. The copy of the letter of instructions immediately reestablishes his contact with the patient, and puts him on notice that the matter is now in his hands for administration.

So much for the obligation of the internist to the general practitioner in matters of this kind. But this is not the full picture. The specialist has assumed obligations and responsibilities toward the patient, and it is his right to expect that the general practitioner, to whom the patient is returned, lend whole-hearted support to the programme of treatment suggested or that he make his objections to it known immediately.

The general practitioner should make a careful study of the report submitted by the internist, making himself thoroughly familiar with the results of the different examinations, observing the changes brought about by the treatment in the hospital, and critically analyzing the suggested regime under which the patient is to live at home. Any contemplated modifications should be made known to the internist immediately and an opportunity offered for a proper discussion of the matter before a final decision is reached.

The general practitioner must stand ready to support the patient in his efforts to carry out his desired manner of living. Social and business obligations can be more easily curtailed when the insistence of a physician can be given as a valid excuse; a tendency to depression can be changed to confidence by an intelligent and sympathetic family physician; and misinterpretations of instructions need to be corrected with unending patience.

No false sense of delicacy should stand in the way of the general practitioner's insisting upon seeing the patient at regular intervals, the time elapsing between such visits being determined by the degree of functional impairment under which the patient is laboring and the amount of activity which is being permitted.

Finally, the general practitioner should encourage the patient to return to a special worker at least once a year for a detailed rechecking of his condition. It is only by this means that an intelligent modification of in-

structions can be arrived at, more stringent regulations in some particulars with possibly relaxation in others, and the patient's welfare properly guarded.

There is no immediate possibility of prevention playing a prominent role in the treatment of cardio-vascular-renal disease. But we are all seeing more and more of what we might term pre-hypertensive states, young people of hyperactive tendencies, a relative rise in blood pressure, a trace of albumin in the urine, and a history of premature cardio-vascular-renal disorders in the family. As time goes on, it is quite possible that we shall be able to recognize these tendencies before too much damage has taken place, and be in a position to prevent, or at least postpone, the development of tissue changes that carry with them such pronounced disability.

Adiposity is a serious menace to the vascular tissues, and must be attacked whether we are considering the subject from the standpoint of prevention or correction. It is all too easy to follow the time-worn custom of advising a restriction of protein and salt and to fail in arousing the patient's interests in the quantitative values of foods. All of these patients should be informed as to their optimum weights, and carefully instructed in the dietetic regulations necessary to attain such weights. The degree of protein and salt restriction must be determined for each individual case, but it is safe to say that in the past more mistakes have been made on the side of restricting these foods than on that of permitting them.

The habits of each patient should be carefully studied. Under this head might be included such matters as water drinking, the regulation of bowel movements, physical exercise and rest, the manner of eating, talking and conducting business, temperamental reactions, social activities, and the use of alcohol and tobacco. Of course, the fluid intake should be arranged so as to meet the minimum requirements of the body and put no unnecessary mechanical or functional strain on the heart or kidneys. Alcohol, caffeine, and tobacco should be restricted in all cases, and interdicted in anything like advanced conditions. In a general way, the slogan "go slowly" will cover the general activities of these patients.

The relation of focal pyogenic infections

to the disorders that we are considering is not clear; but the fact remains that they are of frequent occurrence in association with such diseases, and there is sufficient suspicion of their irritative influence to warrant a careful search for them and a reasonable effort at their removal.

Drugs have little place in the management of cardio-vascular-renal disease. The saline laxatives are indispensable; digitalis often gives life-saving aid, and morphine, at times, takes precedence over them all. The use of diuretics requires judgment, and it is safe to say that they should be used sparingly and never over long periods. The nitrites are still on debatable ground.

When hypertension came to be looked upon as a compensatory phenomenon the nitrites immediately became illogical in their application; this artificial reduction of blood pressure, without an associated change in the natural demands for a higher one, being nothing short of meddlesome drug giving. There is now a great question as to whether hypertension is not a functional state with

the tissue changes in the heart, blood vessels, and kidneys occurring as secondary manifestations. If this be true, the nitrites will find a useful role in such diseases. In the meantime, pressure-reducing drugs should be given with great discrimination, and they will most often be found unnecessary when the patient and the physician are willing to fight the battle with the surer weapons of good habits.

I have done nothing more than touch the high spots of this interesting subject. Any phase of it might be developed ad infinitum. But it has been my appointed task to point out the inter-relation of the internist and the general practitioner in the management of the cardio-nephritic, how they are necessary to each other and to the patient, and how they may work together to the best advantage of all concerned. If the green-eyed monster comes between them, all of their efforts will come to naught; without him, they and their patients may be assured of the best possible results.

SHALL WE OR SHALL WE NOT?

Annual Address, by invitation, before the Raleigh Academy of Medicine,
January, 1926

CHAS. O'HAGAN LAUGHINGHOUSE, M.D., Greenville, N. C.

In 1868 Drs. F. J. Haywood, W. G. Hill, Chas. E. Johnson, Richard B. Haywood, E. Burke Haywood, Wm. Little, F. J. Haywood, jr., W. H. McKee, Jas. McKee, and W. I. Royster conceived a certain medical organization and in 1869 they delivered it to your city and christened it "The Raleigh Academy of Medicine.

In looking back through the 56 years which this organization has functioned, scholarly men who have given scholarly sons, pass in review. Among the golden stars on your service flag are emblazoned the names of each and all of the charter members of the organization save Dr. W. I. Royster: and in addition we find the names of R. C. Carr, W. P. Mallette, Eugene Grissom, Geo. W.

Graham, Wm. W. Jones, S. S. Montague, Robt. H. Towler, Jas. B. Dunn, R. B. Ellis, I. A. Seston, Hubert Haywood, F. T. Fuller, Sion S. Rogers, J. W. McGee, sr., K. P. Battle, jr., John B. Carr, Geo. L. Kirby, G. A. Goggeshall, I. A. Faison, H. McK. Tucker, A. T. Cotton, L. G. Picot, J. J. Barefoot, jr., Jas. J. Phillips and John E. Ray, jr., each of whom has been a veritable inspiration to lesser lights like me.

Among the blue stars designating living service I behold the names of W. I. Royster, Dean of this Society, the Oliver Wendell Holmes of our good State: the versatile Temptation who has done so much to build a better and a finer Commonwealth; Augustus W. Knox, who "loves no darkness; sophisticates no truth; allows no fear;" a man

whose character like that of Phasions "is more than the Constitution," Richard H. Lewis, now on his sick bed, becoming more and more acquainted with the sublime refinement of maturity and of pain; omitting no duty his strength will permit, continuing in the acquirement of respect, confidence and love with such urbane appreciation and grace, that men who knew him pause in their busy lives as they come to comprehend that a great man is living in their midst, a man incorruptible; aflame with the wisdom and the will to advance the slow ascent of his fellow human beings into that beatific state which the love and mercy of Almighty God would have mankind to attained here on earth.

As I study your service flag, my friends,—not only the gold stars but the blue, I come to know that after all there is nothing which makes men rich and strong save that which they carry within themselves.

Some men move through life as a band of music emanating harmony on every side, and those with whom they come in contact follow singing the same songs, whistling the same tunes and naturally keeping step.

Is it any wonder that the younger men of this Academy are doing well in the day's work? Is it any wonder that the medical youth shoulders and discharges responsibility in this city in a way acceptable to the times and in accordance with the high standards the older heads have set? And lastly, is it not natural that I should stand abashed, plain country doctor that I am, by the realization that I am expected to address such an organization, with such a history, and with such a personnel? No higher compliment can be paid a North Carolinian. I'm grateful to you gentlemen; grateful beyond my power to convey. Grateful because you compel me to pause to take stock; to appreciate your manhood, to analyze the past, to glory in the present and to visualize the future.

I am proud of the large part medicine has played in the march of civilization. I am grateful for having been inducted into an army of noble souls whose thoughts and purposes are far above the conceptions and ideals of mediocre men.

I glory in belonging to a corps of the service which has in its daily manual no such commands as, "Parade Rest," and, "As you

were."

I join in the boast that we have been spared the monstrous inertia and iniquity of being bound by the bondage of precedent.

I worship a temerity which gives encouragement to the disproving and smashing of the false theories of the past in order to make way for juster conclusions which will conserve and make sure the happiness and safety of the future.

I appreciate that our obedience to the past must be continually qualified by our reverence for the future. I confess it to be a solemn obligation to correct the errors of our fathers in order that our children may correct the errors of ourselves.

With the accomplishments and experiences of forty centuries behind us I am willing to accept the responsibility of the gospel, "Know ye the truth and the truth shall make you free."

In casting about for a subject which will smack of interest and profit, my mind harks back to a chapter in the Gospel according to St. Luke wherein it is recorded that, "A certain man went down from Jerusalem to Jericho, and fell among thieves, which stripped him of his raiment, and wounded him, and departed, leaving him half dead. And by chance there came down a certain priest that way: and when he saw him, he passed by on the other side. And likewise a Levite, when he was at the place, came and looked on him, and passed by on the other side. But a certain Samaritan, as he journeyed, came where he was; and when he saw him he had compassion on him, and went to him and bound up his wounds, pouring in oil and wine, and set him on his own beast, and brought him to an inn, and took care of him."

Comparing the then with the now I am impressed with the historical fact that Jerusalem was the city of God; that Jericho was the city of vice; that the Priest and the Levite made their living out of a temple in Jerusalem and by the dispensing of holy things for a stipend. That they were on their way to the wicked city of Jericho; that they had the conscience of having earned what they had and they were going to do with that and with themselves *just what they pleased*. Being on pleasure bent they had neither time nor inclination to render service

gratis. The robber had the conscience that *what is yours is mine*. If I can get it. The certain man that went down from the glories of Jerusalem to the vices of Jericho meets the same fate that every man is meeting who is journeying that way today.

That the man coming from Samaria turned toward Jerusalem and its godliness when he came to the great highway, rather than toward Jericho and its vice; which goes to prove that the Samaritan had ideals and his service to the stranger shows that he had sympathy. He bound up his wounds, put him on his own beast, paid and became responsible for his sojourn at the inn. *I am struck with the fact that the nature of man has not changed*, but the facilities which enable him to show what manner of man he is are altogether different. The trained intellect of the priest and Levite and their constant association with holy things were characteristic of the head and environment. The ideals and compassions of the man from Samaria were the things of the *heart* and *soul*.

Ideals and compassion are the only things that have moved the world up until this good hour. It is compassion for ignorance that makes real men teach and write and print and pray. Compassion for the people in the dark, put it into the mind of man to give to the world artificial light. Compassion for pain gave anesthesia, immunization, asepsis and every other means which has alleviated suffering and healed disease.

Idealism and compassion and these two things alone are the only things we can afford to take with us from the parable of the people in the highway, connecting Gehenna with the City of God.

Knowledge without compassion and without soul soils for no advance; sacrifices for no happiness other than its own.

I am also impressed with the simplicity of life in those days. There were virtually no by-paths; the only great road was that with Jerusalem as one terminal and Jericho the other.

The man from Samaria had no knowledge of colon bacilli, streptococci and staphylococci. There was no need or knowledge to make him hesitate lest his dressings and the water given by the roadside might take the life he was trying to save. He did with the lights before him *everything* that *science* and

invention permitted him to do. *Nothing* was left undone.

How different today! The road from Gehenna to the City of God is a road more devious and difficult than that which once connected Jerusalem and Jericho. Man has so triumphed over the forces and sources of Nature that the world now teems with interests more startling than the boasts of necromancers.

The millions of roads leading into the great highway are so much wider than was the highway itself, in the days when the man from Samaria made his journey, that it is more difficult to keep the main line or stay in the straight and narrow way.

Regardless of one's thirst for righteousness, the past and present forces such conflicting opinions from patriarchs, kings, queens, conquerors, captors, statesmen, prophets, crusaders, reformers, scientists, sinners and saints, that he who would know, knows not surely, that is, if he would know well. Seers look upon the stars, and, in the constellations read the pre-historic ideas of man today. From day to day we read the ancient names of the months and gather meanings new to us. We have looked with wonder upon Ptolemy hanging the orbs in the sky; upon Copernicus rearranging them; and upon Columbus, their pupil, sailing into the abyss of the sunset, compassed only by his ideals, his compassions and his faith.

We have seen Napier consolidating our figures into logarithms; and Linnaeus naming all organic things. We see Niagara harnessed more and more each day. We have seen air liquified; sound controlled. We see man with compassion, sympathy and prophetic vision, bridle in hand, making ready to grasp the tawney main of the sea, in order to put the bit and saddle on the rolling waves—for no purpose other than to banish manual labor from the world. Yet, "We hear men cry peace, peace, when there is no peace!"

With it all, the staggering thing is—that in the past 100 years the world has made greater advance in science and in art than in all preceding ages. The coming of steam and electricity are almost within the memory of Dr. Royster; the first public steam railway was not operated until 1825.

Newton's theory was not proved till 1846.

Oxygen was a new discovery 100 years ago; the doctrine of molecular construction of matter; the determination of the mechanical equivalent of heat as well as the science of evolution are all less than 100 years old. The first sewing machine was not made till 1845. Gas was not used for illumination till 1813. The era of anesthetics did not begin till 1847. The cell theory, the germ theory, embryology—these are no older than Pasteur and Koch.

Anthropology, philology, sociology and the science of religion are all children of the nineteenth century. The abolishment of slavery, popular education, the sanitation of prisons and asylums and comfort in hospitals come within the memory of all of us.

The progress of man in commerce, science and civilization during the past century is the mightiest achievement which has come about from the beginning of time.

Think of it! In 1800, just 125 years ago, the United States had only 5,300,000 people. Struggling during this period with grave domestic problems all of them new, learning, growing, building, organizing, until today she leads the world in wealth, mining, agriculture, fisheries, forestry, transportation, education, morals and in medicine.

What was regarded as time and space are more or less if not entirely a matter of chance today. Einstein tells us that they are shadows of the fifth dimension.

A better knowledge of radiation and its potentialities is turning night into day. Before fifty years have passed light will cost less than 1/100 of what it costs today; there will be no more night; travel and production will amount to more in a year than it has heretofore in a score of years.

The growing knowledge of the process of radiation, light and heat, coupled with the economy of its production, prohibits the most imaginative mind from prognosticating the manner of living for tomorrow.

The world is working toward a practical condition in which the man from Labrador can call and see and converse with the man from Rio in one-fourth of a second. The tendencies to bring mankind closer together, to render life more complex, more artificial, richer in possibilities, are increasing man's power for good or evil to an extent sufficient to paralyze the imagination of Rider Hag-

gard to say nothing of the average man in the laboratory or on the street.

Tomorrow can and probably will surprise us by giving to industry a cheap fool-proof storage, battery that will enable capital to transform the intermittent energy of the wind into continuous electric power.

Would you consider it imagination gone wild to picture North Carolina covered with rows of windmills, working electric motors which in turn supply inexhaustible current, at a tremendously high voltage, to great electric mains all interlacing and interlocking with themselves over the State?

In case this should come to pass, think how cheap power will be made! Think what will happen to coal and gasoline and transportation! Think how it will make energy just as cheap in one region as in another! Think how it will decentralize industry doing it all without ashes and without smoke! Chemistry is turning baser metals into gold.

Pari passu with this condition of development, chemistry is today applying itself to the synthetic production of foods. Food is produced by plants though it comes to us second hand when we eat meats. The average plant turns its sugar not into starch which is digestible, but into cellulose which is not digestible.

Animals turn their bellies into vast hives of bacteria that attack cellulose, and the products of this attack are the substances upon which animals live. Chemistry perhaps will do outside of the animal's belly what it is now doing inside. Sugar, starch and protein will then be as cheap as sawdust.

Agriculture will become a luxury; synthetic food will replace our acres of grain and truck. Feeding factories will wipe the dung hill and the slaughter house from the face of the earth; and I am wondering where man will be and what he will do with this the wondrous world which his own genius and free agency has made?

And yet men cry peace! peace! when there is no peace! Why is there no peace? Those who are journeying toward Jerusalem would and could make the very dome of Heaven ring with hosannas and with song, but for the static caused by the mal-adjustments and the discordant wails of poverty, crime, disease and pain coming from the flotsam and jetsam calling themselves men as they go

helter-skelter on the way to Jericho.

"A Hot Time in the Old Town Tonight," is being sung with such resonance and ribaldry by the inadaptability and improvidence of the rank and file of those in and on their way to Jericho that the "Long Meter Doxology" cannot be heard in Jerusalem.

The man from Samaria on his journey today meets the same obstructions, and no others than he met when Christ spoke parables unto men.

Among the countless endeavors giving momentum to the world's achievements nothing stands out more boldly in both spiritual and material things than the systematic and scientific business of *preventing waste*.

In checking the overhead of the United States and in making out its budget, the new psychologist, the youthful sociologist, the modern political economist are all demanding of statesmanship and service that the world's actuaries and the world's auditors ascertain the leaks in the world's business, and that these leaks be both designated and stopped.

These men know that figures do not lie. They have already come into possession of a sufficiency of scientific knowledge to put them on the *qui vive*, as it were.

They are studying the activities, the results and the expenses of all the institutions and undertakings demanded of the non-producers and the cripples of their country.

They are becoming outspoken in the expression that heretofore all the remedies applied are nearly if not entirely palliative and with no hope of cures.

Their inventories and their audits show that our prisons, asylums, alms-houses, epileptic colonies, schools for the feeble-minded, venereal clinics, and Samacands are little less than rest camps along the highway.

Just so soon as the tourists therein can arrange to pack up and get away, the engineers have found that they invariably turn their lizzies and limousines in the direction of Jericho. They come to the roadhouse with nothing, complain bitterly of the service, and leave with no thought of paying their bill; they resume their journey always in some one else's car, give no heed to traffic laws, and when arrested some poor devil from Samaria in order to keep peace and concord stops and pays the fine. They will not keep to the right; nothing gives them such ghoul-

ish glee as getting on the wrong side and smashing the transportation of some Godly man from Samaria as he plods wearily but hopefully along the straight, rough and narrow way leading to the city of better things.

The warning of the efficiency engineers that the overhead is taking the profits from the world's highway is growing louder and more ominous every day. The nation-wide audit shows that the sides of the road leading from Samaria to Jerusalem are traversed by the caravans and lowly travelers that are conserving all the spiritual and material resources of the world.

Efficiency finds no accidents or upsets on this side of the road, save that which comes from the Jazzers and Jezebels as they speed along hell-bent on their way to Jericho.

If coming events cast their shadows before I feel I can see—and it may be tomorrow—that hard-hearted thing called efficiency demanding a balance sheet from every bureau of the nation's business.

If nothing else, plain unvarnished selfishness will come upon the scene and demand the execution of some scheme to fix the blame and find a remedy so that the parasites and vermin of the world will not kill the geese that lay its golden eggs.

If that day comes and efficiency shall decide to throw into the profession's face the most unanswerable and indefensible of all charges; if it shall wish to lay at Medicine's door any part of the responsibility for the world's crime, delinquency and sin; if it can bring the accusation that in the face of the lights before it it is continuing to lend a hand to a one-sided service, which, instead of giving strength to posterity, is actually perpetuating the human weakling thereby compelling the ultimate downfall of mankind.

There is no answer to this indictment, and in the light of our present knowledge there is no extenuating circumstance which Medicine can plead until *pari passu* with personal service, on its way from Samaria to Jerusalem, it gives due and scientific consideration to the breeding by selection of the brawn, brain and heart of man.

Who frequent our offices? Who fill our hospitals? Who use our hygiene? Who take our medicine? We are searching for cures for tuberculosis, brittle arteries, insanity, cancer and the like, and if discovery

blessees our efforts what are we going to do with them? Will we cure? or will we conceal the weak spot in the human germ cell?

The law of the survival of the fittest is just as immutable as the law of reproduction. A race that would save its life so far as its unfit is concerned, must lose it, yet we are coddling and cultivating and permitting the unfit reproduction.

The Great Physician said, "Men do not gather grapes from thorns nor figs from thistles." We may have thought we could. We may have thought that from the thorns of disease we could, by warm beds, soothing concoctions and surgical skill, wheedle nature into giving the grapes of strength.

We may have thought that we could fertilize and graft and cultivate and environ humanities thistles into bearing luscious fruits.

We may have thought that statesmanship, morals, education, art and religion would eventually evolve an inborn righteousness and capacity into all mankind. We may cherish even now the egotistical assumption that man is not only the lord of creation but immune to the laws of creation.

Regardless of what the sentimentalist may argue and of what the man who lives by a faith which leaves it all to God, may say, we know that nature has not bestowed upon man an eternal reprieve from the laws that govern other living things.

We know that like begets like, regardless of environment or type of life. We are what we are because of the germ cells of our forebears.

We cannot legislate or educate or pray morals and character into men. These two things are bred into men. Leopold and Loeb had everything that civilization could give. Al Smith was a product of the slums; so was Jacob Riis. Lincoln was born in poverty and in an atmosphere of intellectual inertia.

We know that certain races in order to excel threw all their weaklings over the precipice. We know that physical inefficiency and mental imbecility will throw the flotsam and jetsam of humanity over its own precipice if let alone.

We know that vice and disease by their capacity for mortality, purify a race. We know that wickedness, folly, sin are nature's methods of racial purification.

We dare not question the wisdom or veracity of the old Hebrew statesman who said over and over again, "The fool shall perish by his own folly." "The way of the transgressor is hard." "The wages of sin is death."

We know that every state and nation is supporting asylums, penitentiaries and reformatories mainly to take care of just a few blood lines.

We know that heredity explains nearly 90 per cent of the outlines of character and intelligence. We took inventory in 1917-18 and found that our efforts were 40 per cent short of army requirements.

We know the marring and making of nations is consummated at the marriage altar. Yet knowing these things we are compelled to admit that the saving of the weaklings is the one paramount undertaking in which we are actively engaged.

The man from Samaria did all that science and discovery gave him grounds to do. Can we stand the comparison? Let's see.

We salvarsanize the syphilitic and say by our very silence, "go and sin some more."

We aerate and feed and rest the tuberculous and say not a word as to his tubercular diathesis.

We segregate the sot until sober and send him out into the world advising such home surroundings as will lead him away from temptation.

We put the dement within the confines of an asylum, giving him hope of recovery and coming back to society and to the privilege of reproduction.

We permit criminals to be detained for a short while, diciplined, prayed for, pardoned and sent back to society with the capacity to make many criminals grow where only one grew before.

We encourage the operation of milk stations to feed babies coming from mothers too weak physically, mentally and environmentally to suckle the products of their own wombs.

Unless the profession spreads abroad in the land a knowledge of the remedy that it has; and unless it joins hands with religion, law, education, statesmanship and economics in spreading a realization of conditions in manner and form sufficient to convert the average man to the wisdom and the godliness of put-

ting, "Do unto others as you would have them do unto you," upon a sound, practical, biological basis, it may be said by efficiency that it is destined to knowingly aid and abet further congestion of traffic on the road leading to Jericho, and what is more pathetic, it is going to make the road insufferably dangerous for the weary traveler as he wends his way from Samaria to Jerusalem.

Efficiency is tracing the rise and growth of all things; houses, tools, governments, schools, industries, professions, religions. It is comparing race with race; country with country; calling with calling.

It may yet be in doubt about some things but it is satisfied, absolutely satisfied that the living together of men in peace and harmony is the one consummation most devoutly to be wished.

It has learned that regardless of environment, integrity cannot fraternize with iniquity. Liberty will not co-habit knowingly with tyranny nor purity with foulness and with filth.

John can never live with Herod. The in-born law of self-preservation forbids lambs mingling with wolves.

Efficiency is coming to see that brains, character and productiveness are being compelled to curtail their own progeny in order

to defray the expense necessary to policing life's highway and furnishing rest camps to the avalanche of incompetents on their way to Jericho.

Efficiency is open eyed to the glaring fact that looking to integrity Christ came to bring peace, but when looking toward iniquity and vagrancy he came to bring the sword.

Efficiency has credited Medicine's balance sheet with fulfilling its obligations to father, mother and child; but it has failed to find appreciative assets to the credit of the grandchild, the great- great- great-grandchild.

Efficiency knows the profession has the means by which a savings account can be opened in Posterity's Bank. Efficiency knows that there is no need to put a traffic cop on the highway from Jerusalem to Jericho until Medicine designates his arms. He may be backed with public sentiment and clothed with the majesty of law, but until Medicine trains him in the use of ligatures, sutures and scalpel he will be run over by both the fools and wise men he is trying to save.

Shall we as a profession continue to drift and vacillate until efficiency demands our remedy, or shall we in accordance with the precepts of our past offer it to North Carolina in the name of the Prince of Peace?

THE CLINICAL DIAGNOSIS OF EXTRA-DURAL HEMORRHAGE CAUSED BY VIOLENCE*

J. ALLISON HODGES, M.D., Richmond

It is usually easy to make the diagnosis of extra-dural hemorrhage by means of the x-ray, but it is more scientific to make it first clinically, and then confirm it by x-ray. This condition is of great importance, both medically and surgically, and is perhaps of more frequent occurrence now than at any previous time, due to the increasing frequency of traffic accidents.

Automobiles alone caused over 20,000 deaths, and injury to over half a million persons in the United States in the year 1925. This represents a daily average of 55 dead and approximately 1,370 injured. Since 1906 the death rate due to motor vehicle accidents has increased steadily until today our streets are more dangerous than our factories, and automobiles cause more deaths than all other vehicles, including trains and street cars, combined.

Last week's traffic deaths in the South numbered forty-five and injured two hundred and ninety-eight, with Virginia leading, and North Carolina and Florida close seconds, each reporting eight killed.

The clinical diagnosis of this condition is of additional importance because it can be relieved frequently and successfully by surgical means, as the extravasation of blood from the middle meningeal artery which cause it, is between the dura and the skull. Almost always, violence of a considerable degree, causes this hemorrhage, and generally produces a vault or base fracture of the skull, or may be more extensive, and include both. In these graver cases, it is especially important that this form of hemorrhage should not be confounded with hemorrhage into the brain itself.

The hemorrhage usually occurs on one side of the head, but sometimes on both sides.

The general symptoms are those of compression, and may be topically considered as dependent upon the location of the rupture

of the particular branch of the artery concerned. Generally speaking, if it be of the anterior branch of the meningeal artery, there is aphasia plus mental dullness; if the middle branch be affected, there is aphasia plus hemiplegia and if the posterior branch is implicated there is aphasia plus hemianopsia.

Gradual development of anesthesia indicates a backward extension of the hemorrhage while an extension towards the base is indicated by ophthalmoplegia, and an extension anteriorly is usually accompanied by a more definite aphasia.

The prominent facts of especial clinical interest are the lucid intervals between the time of injury and the symptoms of brain compression which vary from a few minutes duration to several hours and occasionally several days; also the fact that, although the hemorrhage is produced by direct violence, there seems to be no definite degree of violence that may occasionally produce this hemorrhage. The lucid interval is present in considerably more than half of these cases, but its absence does not on the other hand render the condition improbable. This lucid interval is followed by pressure symptoms of rapid or gradual onset, and are as follows: hemiplegia, partial or complete, preceded or accompanied by convulsions which are usually unilateral. This is a characteristic sign and in its absence a definite diagnosis cannot be made absolutely. Another highly characteristic symptom is dilatation and loss of reaction in the pupil on the side opposite the hemiplegia, that is on the side of the lesion. This symptom is present in a large proportion of all cases, and is highly characteristic. Again, stupor gradually deepening into coma is significant.

The diagnostic value of these symptoms is, of course, greatly increased by their association with evidences of fracture of the base of the skull, especially bleeding from the ear, tumefaction about the mastoid and escape of the cerebro-spinal fluid. The differentiation of extra-dural hemorrhage from medical con-

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ditions causing sudden loss of consciousness and focal symptoms is usually not difficult, but, in the absence of any history of injury or evidence of fracture of the skull, may be extremely difficult or impossible. Other conditions which are liable to be confounded with this are laceration of the brain, of the lateral or superior longitudinal sinus and hemorrhage into the arachnoid cavity, not from a sinus. Usually speaking, it is difficult to make a differential diagnosis from laceration of the brain, when there is no evidence of injury from the middle meningeal artery, but if there are severe and persistent unilateral convulsions, unassociated with hemiplegia, it is probable that there is brain laceration. In cases of hemorrhage from a sinus, the position of the wound is usually sufficient to determine the implication of a sinus hemorrhage. It is practically impossible to make a diagnosis clinically between extra-dural hemorrhage and hemorrhage into the arachnoid.

Fortunately, the treatment for both of these conditions is trephining; and if the clot lies next to the bone in the button trephine, the hemorrhage is of extra-dural origin, but in the case of the arachnoid hemorrhage, the dura probably will be found to bulge from the pressure of the clot beneath it. In some cases of extensive sub-arachnoid hemorrhage, the symptoms are highly equivocal and may simulate meningitis, and while presenting most of the topical pressure symptoms, will continue over a long period, with a long lucid interval and may cause no hemiplegia, although the motor area of the brain may be much compressed.

The incidence of increasing frequency of extra-dural hemorrhage and the fact that serious symptoms may be overlooked at the initial examination and the case dismissed without further study, gives this subject a professional interest that should cause each case of head injury to be carefully and thoroughly examined and followed clinically for at least two weeks.

DISCUSSION

Dr. J. G. Lyerly, Richmond:

I agree with Dr. Hodges that the typical textbook picture of extradural hemorrhage is rarely seen in a patient. The typical history

is that the patient has received a light blow on the head, frequently by a baseball. He is temporarily stunned or dazed, frequently for only a second or two, then gets up and goes about his business. Headache increases, and he becomes stuporous, then unconscious. This picture we do not always see. Frequently we see it associated with severe brain injuries. We are always afraid, when we see a patient with a head injury, that the patient may have extradural hemorrhage. For that reason, we always put the patient to bed, in a hospital preferably, where he can be watched and the pulse and blood pressure observed frequently. If observations are not made frequently, the patient may become unconscious, the pressure may increase, and the case go on to a fatal termination. As a routine, we put the patient to bed and have these observations taken every thirty minutes. As long as the intracranial pressure is increased, the pulse rate is slow. The systolic blood pressure may rise, and usually does rise, if the intracranial pressure reaches a great extent. Before the systolic, usually the pulse pressure rises, due to drop in the diastolic pressure.

In every case I have seen there has been a dilated pupil on the side of the hemorrhage. Frequently this observation will not be made unless you see the patient very frequently, but usually, in the gross hemorrhage, the pupil on the same side will be dilated.

These hemorrhages are not always easily recognized. The hemorrhage may not produce hemiplegia; I have seen such patients who had no paralysis at all. In a right-handed person, pressure on the left side of the brain may produce aphasia, but frequently does not.

We had a patient recently who went three months before the condition was recognized, who had a condition known as pachymeningitis hemorrhagica externa. This patient was in an automobile accident, but was apparently not severely injured. He was in bed several days and was seen by a doctor, then worked about two weeks, but had to stop on account of headache and dizziness. At the end of three months he had a typical brain tumor syndrome. There was no paralysis. He was brought into the hospital in practically a comatose state. We did not know where the lesion was, and had to resort

to ventriculography. We found a large blood clot completely enclosed by a cyst wall, which was successfully removed, and the patient has gotten well. This case illustrates that a patient may go several months with a large blood clot in the cranial cavity without its being recognized.

Dr. J. P. Munroe, Charlotte:

Dr. Hodges has presented his subject in a way somewhat new to me, but it appears to be a very valuable way of distinguishing intradural hemorrhage from extradural.

One case I saw had no dilatation of pupils, and no convulsions. He was sound asleep part of the time, and when he was not sound asleep was yelling continuously. It was more like the cry of a woman in labor than anything else. You could hear it all over the hospital. The autopsy showed an extensive subdural hemorrhage.

Dr. J. E. S. Davidson, Charlotte:

I have had some experience in treating some of these cases. I can not agree with Dr. Lyerly in taking the blood pressure, as I understood it, every half hour. I agree with Dr. Sharp, of New York, who lets his patients rest and keeps them comfortable for some time before he operates. I think Dr. Hodges' paper should have had a great deal bigger audience than he has here, because, in my opinion, Dr. Hodges is about as far ahead of his time in his line of work as Edison is in his. When I first met Dr. Hodges he was advocating preventive medicine. I had never heard of preventive medicine then. Now state boards of health all over the United States are advocating preventive medicine, and I do not think they are giving Dr. Hodges credit for what he did for it twenty or thirty years ago or more.

I have found, as Dr. Munroe says, that if you can keep the surgeons away from these patients and give the patients absolute rest until you see where it is going to localize, that is the best treatment. Dr. William Sharp, of New York, has told me time and again that he never operates on these cases until after the hemorrhage localizes, which is some days. He is very frank to say that he does not know whether they die from the operation or shock, so he does not operate on them at the time.

I think Dr. Hodges' paper is one of the greatest papers that has been presented before this meeting.

Dr. A. M. Willis, Richmond:

A few years ago when we established the department of neurological surgery in the Medical College of Virginia one of the hospital rules adopted was that all patients with head injuries, whether conscious or unconscious, should be seen by the neurological surgeon. I believe we had better err in having too many consultations rather than too few.

Dr. Hodges, closing:

The only thing I have endeavored to do is to caution the physicians, every one of whom knows even better than I about these cases. We do get in a rut sometimes; we do forget sometimes to be as impressive with our patients, when we know dangers that threaten, as we should. For that reason I have called attention to this. The point of interest to me in this class of cases has been when to call upon the x-ray man and when to call upon the surgeon. Naturally, if there is an irregular pulse pressure, or evidence of a depression, or something of the kind, we want a surgeon at once, unquestionably. However, the matter of the x-ray is one that to me has been of great assistance, and I believe that it has always been rather a tendency for me, as with others, to call the x-ray man before I have made a definite diagnosis myself, for the reason that I fear there may be a fracture of the vault or especially of the base that I can not possibly see, unless of course there were exudations that might call attention to it. This is a subject that has been very interesting to me, and it is getting increasingly interesting because accidents are continually increasing.

I am going to ask Dr. Gray to tell us when the x-ray examination should be made.

Dr. A. L. Gray, Richmond:

The time for x-ray examination following an injury depends, of course, upon the condition of the patient. If the patient is not too ill to be disturbed, the time for the x-ray examination to be made is when he is on the way to his room in the hospital. Why? It is of absolute importance, as Dr. Hodges has said, that the physician or surgeon or neurologist bring into play all of his powers of

diagnosis, but if there is a condition which an x-ray examination may reveal, that does not take anything away from him; it simply adds that much more information upon which to make the final diagnosis. If I see a fracture of the skull, which may or may not be depressed, I can not say whether that patient has a hemorrhage that is liable to overwhelm him in the next twenty-four hours. I can find the fracture. It is up to the physician, the surgeon, and all the specialists that he can call into play to add one single item to the information about this case. It is up to him to put all those things together and decide whether or not that patient should be operated upon. So unless there is some contra-indication—and the patient being too ill is the only contra-indication that I know of—the time for the x-ray examination is as soon

as possible after the injury.

Just a few days ago a woman in our city fell from a window in an apartment house. She was found on the concrete pavement, still living. She was taken to one hospital, which was jammed full and could not take another patient, then hustled to another hospital; but, up to the time I left, she had never reacted sufficiently to justify her surgeon in taking her to the x-ray room for an examination. Isn't that so, Dr. Lyerly?

Dr. Lyerly: She had a severe fracture of the skull, demonstrated without x-ray. She is still living.

There are cases when the manipulation for x-ray examination, even though very slight, might cause a great deal of trouble. But in general the time for the x-ray examination is as soon as possible after injury.

CREEPING ERUPTION*

J. G. PATE, M.D., Gibson, N. C.

Creeping eruption is an inflammatory furrow in the skin, made by a larval nematode. The most prominent cutaneous lesion is an erythematous burrow which is palpable, and assumes either a linear, serpigenous, or circinate outline. This burrow is most distinct at the extending end, and tends to fade with vesicle formation at the part first traversed.

When the skin is first invaded the parasite remains at the point of entry for several hours before migrating, forming here a red itching spot, simulating a red bug bite. From this spot the mole-like furrow advances in two to four days, traveling several inches in twenty-four hours. The itching is intense, and since the parasite tends to migrate most when the person is at rest, insomnia is a usual symptom.

The lesions are most often located on the feet and hands; however, we have seen it on the backs, buttocks and genitalia of patients. The number of infecting parasites can be one or many. The more numerous the larvae the more refractory the case is to cure.

Creeping eruption, in name, has been ap-

plied to diseases found in Russia, Sweden, Norway and other European countries, caused by the larvae of horse- and cattle-infesting flies; but the lesions we are describing are found most often in the South Atlantic and Southern States. Dr. Kirby Smith of Jacksonville, Fla., after making more than 40,000 microtome sections of excised skin considers the causal agent to be the larval stage of a nematode. He found this nematode in five different excisions, representing four patients and as many different localities.

The habitat of the larva is damp sand. Fifty per cent of the cases originate at the beach. In our section we get it in ponds while swimming or wading, or, as one man said, while making blockade liquor in Morgan's mill pond. The infection of plumbers' backs, while working under houses in dry sand, causes us to think that conditions here are favorable for the parasite's growth. Possibly drainage from under houses during heavy rains disseminate the larvae as shown by infections of children who live in the Sand Hills, far removed from any body of water. Creeping eruption is most prevalent during the rainy months, when the weather is conducive to bathing and wading. We have never

*Read before Fifth District Medical Society of North Carolina, at Rockingham, April 30, 1926.

observed a case during the winter. Whites are more susceptible than negroes. We have seen only one infection in a negro out of possibly thirty cases.

A person afflicted with creeping eruption will seek medical aid. To aid him the disease must be accurately diagnosed. It is easily confused with "ground itch" but remember the burrow in the shin resembles those made by a mole under the sod.

We had been in practice five years before we saw a case. Salves and antiseptic washes were applied to no avail. A colleague who saw the person and who had had fifteen years of rural practice to his credit called it ground itch; a second colleague of nine years' practice admitted never having seen the like before. The lady passed from under our care into Anson county for a three weeks' visit. Here she was treated; and from results obtained, we have reason to believe that creeping eruption was a rare skin trouble in that county. However, after the larvae had migrated all the summer we burned them to death with phenol and nitric acid.

As previously stated, the infestation may be single or multiple, and successful treatment is not easy. While many of the infections respond readily to a number of simple treatments, even scratching, others are more refractory to all known treatment.

The parasite is usually located beneath the corneal layer of the epidermis where, usually, it is vulnerable to topical applications, but when beneath the horny layer of the sole or palm, or in the outer sheath of a hair follicle, some distance below the surface your results are different. The larva usually lies beyond the inflammatory zone at the end of the extending furrow, and local applications, after curettement and incision most often fail, because the larva is beyond the zone of application.

Iodine, phenol, salicylic acid, mercuriochrome and mercuric solutions have been used with varying degrees of success.

The cases of recent infestation respond well to ethyl acetate. It is applied over the terminal burrow on saturated cotton batting covered with a rubber envelope to prevent evaporation. Ethyl acetate is irritating to raw surfaces, so, in the cases of several days duration where raw surfaces are in close proximity, repeated applications (say four or five daily) of ethyl acetate in collodion is advised. Our best results have been obtained by thorough refrigeration with ethyl chloride spray. An area the size of a half dollar is thoroughly frozen at the end of the burrow.

SUMMARY

(1) Creeping eruption is a skin disease becoming more prevalent each year.

(2) The causal agent is the larval stage of a nematode found usually in damp sand and under houses.

(3) The diagnosis is easy because the prominent lesion resembles the track of a mole under the sod.

(4) The cure is best secured with ethyl acetate in collodion and refrigeration with ethyl chloride spray over the terminal burrow.

Gentlemen: As many of you are general practitioners, you will meet this disease again soon; the patient comes with a malevolent disposition, suffering with insomnia due to itching, and unless you give hasty therapeutic relief he will view your professional ability from the disgruntled aspect of an itching layman.

REFERENCES

J. L. Kirby Smith, W. E. Dove, G. F. White: Creeping Eruption. Archives of Dermatology and Syphilology, Feb., 1926.

THE IMPORTANCE OF PERIODICAL EXAMINATION OF WOMEN*

SOUTHGATE LEIGH, M.D., Norfolk

In a way I owe the members of this society an apology for discussing before them a subject which I have previously taken up more than once at other medical gatherings; and yet it concerns a matter of such exceedingly great importance, a subject so sadly neglected, that I feel sure you will forgive me and be interested.

It is peculiarly appropriate, also, for this society to renew its interest in the question of the prevention of cancer since not many years ago it formed an active committee on Cancer Education which did not a little work in arousing the interest of the public and profession in the three states on this most urgent subject.

I realize that most of the members of this society, which is recruited from the thoughtful and earnest members of the profession in the three states, are already doing their part, as individual doctors, in the great work of cancer prevention and cure, but I am calling upon you now in the most solemn manner to go still further and interest the members of the profession around you in this vital work.

With your active and continued co-operation, the cancer rate could be promptly and permanently lessened in the Carolinas and Virginia.

This paper is intended as an earnest plea for the systematic and periodical examination of women, especially with the view of detecting precancerous and early cancerous conditions of the generative organs.

The educating of the public in regard to cancer is being carried forward in a more or less thorough manner by the American Society for the Control of Cancer and even in our own section fairly extensive efforts have been put forth from time to time through medical literature and through the lay press.

Our people have a great fear of cancer, and are coming more and more to the understanding that prevention and early treatment

are vitally essential. They are looking out for various danger signs and are seeking medical advice much more generally than formerly.

The question of the importance of periodical health examinations is also being better understood and practiced, both by the profession and the public.

But in the matter of examination of women, we are all of us woefully negligent. A very large proportion of women are affected with conditions, which on account of neglect, are leading directly to cancer. Practically all of these conditions can be cured and cancer prevented.

The various signs of danger are unfortunately not usually accompanied by pain and on that account are overlooked or belittled by the victim. Chief among these signs are leucorrhea and profuse menstruation, or bloody discharge after the cessation of the menstrual function. Leucorrhea is always an abnormal discharge and its source should always be looked for. In a large proportion of cases it comes from erosion or ulceration of the cervix, conditions which frequently lead to cancer. It is absolutely unsafe to permit a raw spot to go unhealed. Local treatments or operation should be promptly resorted to. Chronic endometritis, producing a pus discharge, should also be promptly dealt with.

Comparatively few post puerperal cases are examined, and as a result the natural, though often minor, effects of confinement go on untreated for months and even years. The use of douches in these cases, avoidance of heavy work, and ordinary care as to rest and food, are usually neglected resulting in failure to properly heal.

Profuse menstruation at all ages is a danger sign, and its cause should be promptly determined and corrected. It frequently comes from precancerous conditions which if too long neglected will bring on cancer.

There is a general misunderstanding among women in reference to profuse flow at the

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menopause. They do not understand that at that time the flow gradually diminishes and practically never increases.

Increased flow at the menopause, especially with leucorrhea, calls for prompt measures, usually including curetting for diagnostic purposes and local effect.

Especially alarming is the appearance of flow, however slight, after the establishment of the menopause.

According to the best statistics cancer is increasing to an alarming extent. Not being a reportable disease we are forced to rely only upon the insurance figures which show an increase in the death rate from 63 to 89 per 100,000 population, in twenty-three years.

No doubt improvement in gathering statistics and more prompt diagnoses, considerably modify these figures, and yet we know that there has been a steady increase when there should have been a decrease in the disease.

The deaths from cancer in this country approximate 100,000 a year.

While cancer of the stomach stands first, cancer of the uterus comes next with over 12,000 deaths.

Six thousand of these deaths should be prevented and can be prevented.

But how?

The problem is not nearly so difficult as it may seem.

In order to solve it we must teach the women, and especially those who have had children, that they must be regularly examined, and next we must arouse the profession, and especially the general practitioners, as to the vital importance of such examinations, and persuade them to equip themselves so as to be in a position to make these examinations in a decent, refined and, as far as possible, unobjectionable manner.

Our State Boards of Health have never become aroused to the importance of the situation in regard to cancer of the uterus. They are doing so much in the way of looking after the health of the communities in other directions, that in many respects they are bordering dangerously on state medicine. They are sending their agents into counties where the local profession is both able and willing to care for the indigent, and encouraging both that class as well as the class which can pay its way, to be treated at the

expense of the state.

And yet in this vital matter of cancer in women, but little effort has been made.

State and local health boards should arouse the women and the profession as to the necessity of regular examinations, the dangers that may be avoided, and the wonderful life-saving and suffering-saving results that will follow.

At the last meeting of the Southern Surgical Association, we discussed the question of the proper way to examine women, quoting freely the words of Marion Sims, the father of American Gynecology, and urging the profession to return to Sims' methods, speculum and position of the patient called by his name.

It would not be inappropriate to repeat here a few lines from Sims' book as follows:

"It has been objected to this speculum that its use requires the assistance of a third person. Apart from its real value, *there could be no stronger reason for its universal adoption. I insist that a third person should always be present on such occasions. Delicacy and propriety require it and public opinion ought to demand it.*

I am sure that I never made a vaginal examination or used a speculum a dozen times in my life without the presence of a third person. We are too apt to disregard the innate feeling of delicacy when we have been so much used to hospital practice; but we can never make a mistake if we always cultivate the same gentleness and kindness towards the poorest hospital patient that we would use toward the highest princess. We should never in our examinations allow any exposure of person, not even in hospital practice. When the touch is made, this can be done, of course, with the patient on the back covered with a sheet. When the speculum is used, we should see only the neck of the womb and the canal of the vagina."

The leaders in gynecology are usually men of wide reputation. As a rule, women who go to them for examination readily submit to any ordeal, however shocking to their modesty.

With men of lesser standing and reputation, and especially with the general practitioners, the women patients will refuse, and to an exceedingly large extent do refuse, to permit thorough examinations because of the

very unpleasant manner in which they are usually conducted.

We are very positive in the opinion that the main difficulty to be overcome is the natural modesty of women, and their abhorrence of the usual methods of examination, which are as a rule both crude and disgusting.

There is no reason why such examinations should not be conducted in the most modest and delicate manner.

A woman attendant is absolutely essential.

The dorsal examination may be done entirely under cover, the operator's hand also being gloved.

For the speculum examination, Sims' position is urged, as being the best for professional purposes, being practically without exposure, and being the least disagreeable to the patient.

As we have urged several times before, each physician should have an office hour three times a week or oftener, for the examination and treatment of women, with a woman attendant, and the necessary equipment.

Cards to that effect sent to women patients together with frequent advice and warning will bring many of them to seek relief from precancerous conditions, and even early cancer which can usually be cured by prompt surgical treatment.

Let all of us, from now on, urge upon our women patients, and the women of the country through various appropriate agencies, the vital necessity of periodical examinations, and thus do our part towards saving 6,000 women in this country who are threatened with horrible deaths from cancer of the uterus in this year.

THE DIAGNOSIS OF ATYPICAL APPENDICITIS*

J. W. DAVIS, M.D., F.A.C.S., Statesville

The diagnosis of appendicitis is not always easy. The typical cases which begin with pain in the epigastrium, later radiating to the right lower abdomen and associated with nausea, vomiting and tenderness over McBurney's point naturally leads one to make a diagnosis of appendicitis. These findings substantiated by an increase in the leucocyte count and an increase in the pulse rate together with negative urinary findings, give a clear cut picture of a typical acute appendicitis.

All cases, however, do not give this clear cut picture and many severe cases of appendicitis are ushered in by obscure and often baffling symptoms which make the diagnosis at times very difficult. An early diagnosis is of the greatest importance, for only an early diagnosis can mean early operation and an early operation means the lowest possible mortality.

Patients often delay calling a doctor until the inflammation has advanced until there is a rupture of the appendix, or at least until the inflammation has advanced to a point

where there is a considerable associated peritonitis.

Only by obtaining a very exact history followed by a careful examination can a diagnosis be made in many of these obscure cases. We do not wait for the classical symptoms but make a tentative diagnosis on the history and just a few signs and symptoms, some of which may not be very pronounced. This diagnosis can usually be substantiated by the laboratory and negative x-ray findings.

The question of temperature in acute appendicitis is one which should not enter into the diagnosis as an early symptom. To wait for an increase in the temperature means that you are waiting for an extension of the infection. In some cases there is no temperature until an abscess has actually formed.

A typical acute attack of appendicitis usually presents several signs and symptoms which may be regarded as more or less classical. There is a definite cause or reason for each of these symptoms. Unfortunately, however, many cases may in the early stages present only a few and to wait for the appearance of all the classical symptoms may allow the inflammation to progress until the appen-

*Read before the Fredell-Alexander County Medical Society, April 6, 1926.

dix is gangrenous or an abscess has formed.

The classical symptoms of appendicitis are:

- (1) Pain
- (2) Tenderness
- (3) Rigidity on pressure over the appendix
- (4) Increase in pulse rate
- (5) Nausea
- (6) Vomiting
- (7) Increase in number of leucocytes with an increase in the per cent of polynuclear leucocytes

(8) Temperature—which usually comes as a result of and after the inflammation of the appendix has become quite extensive and severe.

In making a diagnosis it is of the greatest importance to obtain a very careful history, particularly with regard to previous attacks and as to the exact mode of the onset of the present attack. Patients often attribute the pain, tenderness, nausea and vomiting to something they have eaten and this is a frequent cause of delay in calling a doctor.

The abdominal pain is often first general and diffuse because of the nerve distribution of the superior mesenteric plexus of the sympathetic which supplies both the appendix and the intestines and any nerve pain is likely to be referred to the peripheral extremities of the nerves. Later the pain may be located in the umbilical region by being referred to the sympathetic ganglia which are located in this area. The severe pain in the region of the appendix which is often of a throbbing character is due to the actual irritation of the nerves in and about the appendix and the colicky pain to associated spasm of the adjacent parts of the small and large intestines.

The tenderness is due to an actual neuritis and is elicited by pressure. The tenderness is, in the vast majority of cases, localized in the region of McBurney's point because of the fact that although the appendix may lie in almost any direction the cecum is more or less fixed and this is the point at which pain is felt. The pain on pressure usually indicates the base and not the tip of the appendix. In gangrenous cases, the base of the appendix is the last part to be affected by obstruction of the blood supply. The tenderness, however, is not always confined to this particular area. If the appendix is post-cecal or if the tip of the appendix is in the

pelvis or lying towards the left side the tenderness may be in either of these regions. Everyone will recall cases in which the pain and tenderness have been in the mid-line or even towards the left side or in the pelvis where the inflamed appendix attached to a mobile cecum may be lying in either of these localities.

The rigidity is usually at first of the right rectus muscle and is reflexly due to peritonitis. Later all the abdominal muscles are affected if the appendiceal inflammation becomes extensive and is due to the fact that these muscles receive their supply from the lower intercostal nerves while the superior mesenteric gets its supply through the splanchnics derived from some of the intercostal nerves.

Vomiting which so often occurs has no relation to a gastric condition but is reflex.

Temperature is due to the body reaction to infection and to toxemia.

The patient may be inclined to keep the right thigh flexed from involvement of the iliopsoas muscle. This may occur when the tip of the appendix lies down close to the muscle and the inflammation has extended to the peritoneum overlying this muscle. This is also partly the cause of patients assuming a stooped position when walking as is so often seen in patients who come into the hospital with an acute attack of appendicitis.

The increase in the leucocyte count is due to the body reaction to the infection. The leucocyte count is usually an index to the extent of the infection. The differential count may be considered an index to the severity of the infection. The higher the percentage of polynuclears the more severe the infection.

In the average case of acute appendicitis the count varies from 10,000 to 15,000 white blood cells with a differential count of from 75-80 per cent polynuclears. Sometimes even in acute attacks the count is very low. I once saw a case of acute gangrenous appendicitis with a white count of 4,500 and with 70 per cent polynuclears. This, however, is very unusual and an accurate blood count is of the greatest assistance in making the diagnosis. The white count rarely ever goes above 20,000. In the presence of a very high leucocyte count, it is well to look out for pneumonia or some other condition. I once saw an acute suppurative appendix in which

the count was 39,000 with 96 per cent polynuclears. This case, however, was a very unusual one. The young man had an acute attack and was treated by his family with purgatives for two days and a doctor was only called in at the time the pain became very severe. The appendix was very large and badly inflamed and there was a large amount of thin purulent fluid in the abdomen and no adhesions at all. The high count was explained by the body reaction to the absorption of this purulent fluid.

The differential polynuclear count is very important. It may be considered in the average case as an index to the severity of the infection. When the differential count is below 80 per cent, the inflammatory condition has usually not progressed to the point of pus formation. Above 80 per cent, however, we are likely to find a purulent condition.

The atypical cases may present at first only one or two symptoms. Of these the most common is pain. There may be pain in the region of the appendix which is more or less persistent and there may be no nausea, vomiting or increase in pulse rate and the blood count may be normal. These cases are most likely of the subacute variety though even an acute appendix with a progressive inflammation may present only pain.

Certain cases may have pain in or to the left of the mid-line and with or without the other signs and symptoms. In these cases the appendix may actually lie to the left of the mid-line. The pain may be in the right upper abdomen especially where the appendix is post-cecal or where the tip of the appendix was very close to or even touching the gall bladder.

Occasionally where the tip of the appendix is close to the ureter and very acutely inflamed, symptoms simulating stone in the ureter may make the diagnosis very difficult.

There is one symptom which I have noticed in many cases, particularly in the subacute and mildly acute recurrent types. This symptom is usually described by the patient as an aching or drawing sensation in the region of the appendix which is noticed immediately after he retires at night. The pain may be so mild that it is barely noticed or so severe that the patient can not get to sleep for some time. This is a very characteristic symptom and in some instances may be dis-

covered only by questioning the patient very closely.

Acute streptococcic appendicitis is so different from the other types that we have come to regard it almost as a different clinical entity. It is this type which is the despair of every surgeon. The attacks are often ushered in by the most atypical symptoms. Sometimes a chill followed by pain in the right lower abdomen with the rapid appearance of a severe peritonitis associated with a profound toxemia which comes on with such appalling rapidity that the patient may not have them call a doctor until the peritonitis is extensive. In these cases the leucocyte count may be very low and the differential count may also be very low although it is not uncommon to find a low leucocyte count with 90-95 per cent polynuclears. The reason for this is that the body does not react to the streptococcic infection like it does to other types of organisms. Instead of an increase in the number of leucocytes there may be an actual decrease. The mortality in those cases is very high because certain types of streptococcus when once they escape from the confines of the appendix spread over the entire abdomen with frightful rapidity. Since the epidemic of influenza in 1918 it seems that this type is more frequent and may be due to the incidence of new types of organisms of the streptococcus group.

It is not within the scope of this paper to take up the differential diagnosis of the various conditions which may simulate appendicitis. The differential diagnosis from other conditions which may simulate it can usually be made by a careful history, thorough general examination, white blood count, differential count, urinalysis and if necessary a cystoscopic examination with an x-ray of the kidneys, ureters and bladder.

In years past doctors have sometimes hesitated to make a diagnosis of appendicitis in obscure cases because they feared that when the patient went to the hospital a different diagnosis with a consequent reflection on their skill in diagnosis would be made. This condition no longer exists. Now even the laity knows that only by laboratory and x-ray examinations which can only be made in a hospital can a definite diagnosis be established in certain cases. For this reason doctors no longer hesitate to send patients in

with the provisional diagnosis of appendicitis.

CONCLUSIONS

(1) An accurate diagnosis of appendicitis can usually be made from a careful history together with a general physical examination.

(2) A complete urinalysis together with a white blood count and differential count will confirm the diagnosis in most cases.

(3) There are certain atypical cases the diagnosis of which may be difficult because the symptoms which are presented are few and obscure. These cases should always be

carefully investigated and if necessary the diagnosis substantiated by eliminating all other probable causes of the symptoms presented.

(4) Acute streptococcic appendicitis often presents atypical symptoms and only an early diagnosis and prompt operation can prevent a high mortality.

(5) Temperature is not regarded as one of the early symptoms. It appears usually when the infection has spread beyond the appendix or when pus formation is beginning.

SOME CAUSES OF MENTAL DISTURBANCES*

M. L. TOWNSEND, M.D.

Director Bureau of Health Education, North Carolina State Board of Health, Raleigh

Neither insanity, nor any other mental or nervous disturbance is of itself a disease entity. These conditions are the outward manifestation—or rather one of the outward manifestations or symptoms resulting from one of many or of various co-existent causes.

Neither a fever nor a cough is of itself a disease entity although they come much nearer being the result of one cause than does mental abnormality. A fever is invariably the result of some infection whether that infection is pneumonia, tuberculosis or an abscess. A cough is the result of some irritation in the respiratory tract. It may be an infection or the result of mechanical irritation from dust or fumes or dry air.

A mental disturbance is not always the result of an infection nor of an irritation but it may result from either or both of these and in addition may also result from psychological conditions.

There are many things, many diseases and many conditions that will produce the symptom of a mental disturbance.

It is admitted that animals have mentality but it is claimed that humans only have both mentality and intellect. Perhaps the two words mean fundamentally the same and are distinct only in designating degree. Mental-

ity is not a tangible thing to be dissected or isolated. The word only expresses a function just as strength represents the power of a muscle to contract. Mentality is a function of the central nervous system and is a composite of the abilities to perceive, remember, measure values and direct muscular activity. The degree of perfection in performing all of these and the synchronizing of them determines the degree of mentality. The higher degrees may be intellect and the lower degrees "animal instinct."

Mentality may be developed and is developed by exercise in school and in business just as strength is developed in the gymnasium and at work. Skill, as in playing a piano or playing billiards or golf, is a development of both mentality and muscle. Mentality is a function of the central nervous system and its degree is governed by the capacity, not the size alone, of the brain. Mentality, which includes both so-called sanity and insanity, is no more "inherited" than is strength inherited. We may inherit blue eyes and a pug nose and we do inherit the tendency to develop a physique capable of producing strength, but sometimes a small man is stronger than a large one because the muscles of the large man are not developed. One person may inherit a physique more vulnerable than others to tuberculosis but such a person is not predestined to die from that

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disease. Inheritance is a predisposing factor to mental capacity and when that capacity permits the development of mentality only to a degree below the arbitrarily fixed standard called normal then insanity, another arbitrary term expressing degree of mentality, may be said to be inherited. Actual congenital defects are sometimes an impassible barrier to development of both mind and body but many physical weaklings have by careful physical education overcome their handicap. Many mental weaklings have by proper mental education developed a capacity for normal mentality.

Congenital defects cause a small per cent of the physical weaklings. Most of them are made so by improper food, neglected infections, contagious disease or vicious environments. By the same token, most mental defects are made so by these same conditions in their early youth.

Inheritance cannot be completely ignored but as an excuse for subnormal mentality it has been worked overtime until it has become thread-bare. In most cases it is in effect an admission on the part of the one who gives it that he does not know and does not have the energy to find out the actual, immediate cause of the abnormality.

The argument thus far may be academic but it is given for the purpose of emphasizing the fact that mentality is a purely physical phenomenon resulting from the activity of physical organs and is subject to the same natural laws which govern any one of its component special senses. Mental disturbances are the result of injuries to the central nervous system just exactly as cardiac disturbances are the result of damage or injury to the heart. If the central nervous system is damaged, mentality must necessarily be decreased.

In a discussion of the complications of influenza, I find this statement in Practical Medicine series under the sub-heading of Mental Disturbances. "These were chiefly of the type of acute mental confusion. They were more frequent in the severe cases and relatively more frequent in cases complicated with pneumonia. There is a delirium with hallucinations, sometimes violent and agitated, sometimes quiet, continuous or intermittent, of extreme mobility without any

in between the second and fifth days. It usually disappears with the subsidence of the fever but in three cases a confusional state lasted for several weeks. In five cases difficulty in articulation and deglutition were the only symptoms observed and in these there was no paralysis of the tongue or palate and no tremor of the tongue. Paralysis of the third cranial nerve was observed in two cases with death from pneumonia. There were no macroscopical lesions in the brain at necropsy. Epileptiform convulsions, typical and generalized, with biting of the tongue and involuntary micturition occurred in four cases, three of which were fatal."

Here we find that the toxins eliminated by the influenza bacillus are sufficiently irritating to the endothelial cells of the nerve sheaths and to the nerve cells themselves to so interfere with their proper and normal functioning that the symptom of a profound mental disturbance is manifest. Usually this symptom subsides as soon as the presence of the irritating toxins is removed. There is usually no permanent damage to nerve tissue structure and hence the disturbed function is only temporary. But while it lasts there is found in its category of symptoms practically all of those found in the so-called mental diseases, from epilepsy to melancholia and dementia precox. Even a toxin of the nature of influenza would certainly do irreparable damage to nerve tissue if contact with it were sufficiently long continued.

Different toxins which affect nerve structure do so in different manners. Difference in the manner by which nerve structures are affected causes difference in disturbed function with consequent difference in the character of the mental disturbance. In pernicious anemia, for instance, it has been fully established that there is a combined degeneration of the posterior and lateral columns of the spinal cord. It has also become generally recognized that the anemia, per se, does not produce the cord changes but that a toxin is responsible for both the anemia and the cord changes.

Here again it is proven that a circulating toxin causes degeneration of nerve structure and in this instance this particular toxin has a selective action on only the posterior and lateral columns of the cord, while the higher nervous centers are not avowedly involved.

This particular toxin attacks primarily the white matter.

Other toxins act differently but none the less disastrously. Toxins with definite composition, or groups of toxins with related composition produce constant effects, accounting for the constancy of symptoms classified by various names which psychiatrists flaunt in our ears so nonchalantly.

There is a group of toxins classified by their effects rather than by the agent eliminating them which are called endotheliotoxins. These toxins have a selective action on producing an endotheliitis. By the relative producing an endothelutis. By the relative prominence of symptoms in the various structures lined by epithelial cells an endotheliitis is variously called rheumatism, endocarditis, arthritis, iritis, growing pains and neuritis.

This same group of endotheliotoxins are particularly destructive of endothelial cells lining nerve sheaths and the arterioles which dip down into the cortical portion of the brain.

Ascertaining that this group of toxins come mostly from diplococci, streptococci and staphylococci, directs attention, in the presence of some acquired mental disturbance, to a search for some focus or foci of infection which may be the source of such toxins. Cotten and Reed have been accused of being extremists in the importance they attach to focal infections as causative factors in the production of mental upsets and epilepsy. Each of them has had extensive experience in searching out and removing these foci of infection in the mental and epileptic patients coming to them and since "the proof of the pudding is in the eating"—the proof of their argument is the fact that so many of their patients thus treated get well.

To be sure such treatment cannot always be effective for there can be no function without structure and if structure has been permanently destroyed there can be no return of function. Neither the removal of foci of infection nor the treatment of syphilis will restore function to nerve structures whose normal cells have been replaced by scar tissue. The confirmed paretic and tabetic may expect little benefit from antiluetic treatment.

Whatever logic this argument has proves the necessity for early care and the most pains-taking scientific study of all cases of

mental disturbance which may be of toxic origin.

Then there is that other class of mentally ill cases which are due to maladjustments and to mental habits. The sooner such cases are given scientific care for adjustments and re-education, the greater will be the percentage of improvements and recoveries.

SUMMARY AND CONCLUSIONS

There is nothing any more mysterious or supernatural about the function of mentality than there is about the function of seeing, hearing, tasting, feeling and smelling except that mentality is the sum total of all of these to which is added the faculty of remembering, weighing values and directing muscular activity. The full development of all of these in their proper proportions and relations results in a giant intellect. Anything which disturbs this, causes mental unbalance. Mental ills are no more hopeless than physical ills if equal effort is directed toward their correction.

DISCUSSION

Dr. Albert Anderson, Superintendent State Hospital, Raleigh:

First, let me congratulate Dr. Townsend upon this well-written, logical paper; but I arise to present a different viewpoint about mental disturbances, by which I assume he means mental diseases. I may, in brief, express my own experience, which is in accord with that of such psychiatrists as Albert M. Barrett, of Wisconsin, George H. Kirby, of New York, and J. K. Hall, of North Carolina and Virginia.

Excellent data about the importance of heredity as a factor in causing mental disease is given in an article by Dr. Barrett, which appeared, I believe, in *The Archives of Neurology and Psychiatry*, perhaps in January, 1925. A committee headed by Dr. Kirby has presented in detail a study of infection as a possible cause of mental disorder, and their studies have not brought them to the well-known conclusions of Dr. Cotten and Dr. Reed.

May I be pardoned for making a statement or so with reference to the effect of heredity in mental disorder as observed in Dix Hill? Mrs. S.——— C.———, her sister, and a brother have all died in that hospital. In the———family of———

—county, Huntington's chorea seems to be especially prevalent. Our records show that Mrs. ——— spent twelve years in our hospital. She had chorea, one of her brothers had it, three of her sons had it, and one of them died in the hospital. Two of her sons are now in the hospital suffering from Huntington's chorea. We have just admitted to the hospital Mr. ———. In him the disease has reached chronic form, and information induces us to believe that two of his brothers were afflicted like himself.

Dr. Ashby, of our staff, has gone carefully over the last 150 consecutive admissions of women. In 60 of these admissions he has undoubted evidence that insanity was existent in the families.

May I say a word to the surgeons: In a patient whose mental condition is not normal do not operate until you know exactly why you are operating, and until you are absolutely certain that the operation is necessary. In my address before the State Society meeting at Pinehurst I tried to stress this matter. All state hospitals have in them patients who have been operated on repeatedly without benefit. A physical complaint may be a mental symptom. But mental diseases should be treated as such, and effort should not be made to bring them into the domain of surgery. I wish Dr. Kirby, the medical director of the Psychiatric Institute of New York, with his wealth of experience and his happy faculty of presenting it, were here to enlighten us.

Dr. William Allan, Charlotte:

I feel that in medicine we see what we look for, and I think we do not see the mental side of cases because we do not look for it. I have been blind for some time, and am ashamed of it. I have recently become impressed, and oppressed, by the tremendous field there is on the mental side of health. It is a larger field than the physical side. I do not want to get into any discussion of the causes of mental difficulties, because I know nothing about them. I am not in the least impressed by the theory of focal infections in either somatic or psychic troubles. I do believe heredity is a tremendous factor. I think we should visualize these mental problems just as we do our ordinary mental and

surgical problems, as definite clinical entities. Whereas in various types of fevers we expect certain temperature curves, blood findings, and skin rashes, so in the various psychoses we find certain definite mental symptoms that make up the clinical picture. Too often we simply stand from under whenever a patient displays mental symptoms, instead of faithfully trying to recognize the clinical picture before us. We hear too much about the mechanism of the disordered mind, when what we need is drilling in the recognition of the clinical picture presented by the common psychoses. We lack the conception that in dementia precox, for instance, we have as definite a thing as pernicious anemia; the etiology is just as definite and as well known as in measles or smallpox; the pathology is as definite as in typhus fever; and the clinical course less varied than in syphilis. But retardation or delusions do not suggest to us concrete pictures as do pain or fever, chiefly because we are unwilling to labor sufficiently long and patiently to become familiar with the diseased mind. One of the chief reasons we treat our mental cases medically and surgically is our lack of interest in the mental side of them.

Dr. James K. Hall, Westbrook Sanatorium,
Richmond:

I am sorry to hear Dr. Townsend and Dr. Anderson and Dr. Allan talking about something about which they know so little. They have propelled me by their example into talking about something that I know nothing at all about. And that is why I am sorry I have come to my feet.

In the Universe I think there are only two things—the individual and all things else. These things added together make the Universe. The individual and the Universe react upon each other. Both the individual and the Universe must be responsive each to the other. Each must affect the other. The bigger of these two things is the Universe; the smaller is the individual. But each irritates the other, and each responds to the other. But I can easily imagine that no one of us has appreciable effect on the Universe. Most of us make no dent in it. Were I to disappear at this moment from the human stage there would be a moment's flurry in a home, but not elsewhere, and the great Cosmos

would continue as it was before I came and while I was here.

The Universe that man lives in is all but illimitable in its reach and complex beyond conception in its composition. Irritants originating millions of miles away are constantly impinging upon us. They make themselves felt through our nervous system. Through this mechanism largely we manifest our reaction to the forces that play upon us. The sum total of our activities constitute our conduct, and by our conduct we are known. If our behavior be in keeping with that of the neighborhood about us we may be presumed to be mentally normal; if it be considerably and persistently different from the doings of those around us then we are mentally abnormal. The quality and the degree of response to environment depend both upon the constitution and the condition of the individual as well as upon the nature of the irritant that arises out of the environment.

When we are called upon to look into disorder of conduct we are confronted by no small problem. Our investigation must include a going through of the entire individual and all the phases of the far-flung Universe with which he comes into contact. Each day that one has lived, with its particular environment, has left its impress upon the nervous system, upon the mentality, upon the personality, and upon the conduct. Each living thing has two sources of origin—one source is physical ancestry, the other source is environment—not only the environment of the particular individual, but of all his ancestors back to the beginning of the race to which he belongs. Some one has said that heredity is only environment crystallized in the individual and passed along to successive descendants.

A few days ago a man asked if I had ever been drunk, and one more question was added to the many that I have left unanswered. He had been drunk, and he was feeling bad, not because he had been drunk but because he was making the transition from drunkenness into sobriety, and the coming back into civilization was painful to him. Before he got drunk he was a normal man, but the state of his feelings had evidently not been agreeable to him, otherwise he would have kept them as they were instead of changing them by the physiological action of alcohol. The in-

gestion of a good deal of whisky had pushed him way back out of present day civilization into the lower animal kingdom out of which our ancestors had emerged millions of years ago. But he could not stay there because his whisky gave out, duties awaited him, and he had to come back into the maddening strife called civilization. Being born again into professional life, filled with problems and responsibility, was painful to him, humiliating to him, and when he asked if I had ever been drunk he was seeking sympathy and understanding.

No drunkard wants to stay drunk; many of them lack the courage to endure the suffering of becoming sober. Nicodemus, good man though he was, lacked the courage to undergo a second birth. But if we are ever to amount to much in the marching forward of the race each of us has to be born again, sometimes many times a day. Otherwise we cannot keep in adjustment to the changing life around us, and so we would be left far behind.

Politically I am tightly tied to no party; medically I am an unwavering democrat. Nothing more medically profound has been penned than the well-known couplet of Kipling:

"For the Colonel's lady and Judith O'Grady
Are sisters under the skin."

It means much—that structurally, chemically,—in hopes, aspirations, temptations, fears, anxieties, weakness, strength—in all things, we are all alike. And bone and sinew and serum is not all of any of us. The body may perhaps be sound, while the mind and the feelings may be torn to tatters. Lately a lad in his 'teens was sent to me by a diagnostician who had found that the youngster's body was sound. But the boy was a wreck in the immaterial domain of his being. He had rolled on the floor, yelling and crying, and begging not to be allowed to die. After much questioning I found that when he was only eight or ten years old he had been dragged many times into an old barn by a degenerate man and there sexually assaulted and told that if he ever revealed his experience that he would be murdered. And those assaults upon the little boy's emotional being had wrecked his life, and fear—terrible fear, and mortification, had paralyzed his life. Yet his physical being had not been injured,

and because of fear he had kept the terrible experience locked in his own breast.

The physical body is a part of one's being, but not all of it; the body is a portion of one environment, the part of the environment nearest to one, but it is not all of one's surroundings. And the human body is not all of one that needs to be studied. And germs and other poisons are not the only damaging agencies that make themselves felt by the mentality and the emotions.

I offer you my apology for the many words, but in some such fashion I believe we must think of our patients who are troubled in their minds, and tense in their nerves.

Dr. Townsend, closing:

Dr. Hall spoke of some one whose two sisters had tuberculosis. The incidence of disturbed mentality in families does not, of itself, prove inheritance, any more than the incidence of several cases of tuberculosis in a family proves inheritance. In the matter of mental disturbances, we are now in the same stage as we were years ago when honest people thought tuberculosis was inherited. We reason by analogy that measles and mumps must be caused by a specific virus, but no one has yet found this virus. We reason by analogy that disturbed mentality must be the result of disturbed structure. The environment which furnishes disturbed structure in one member of a family will also

affect other persons in that same environment.

Certainly I did not try to include all causes of mental disturbance, and did not intend to even refer to the feeble-minded, whose condition is the result of inherited deficient structure. The feeble-minded child does not have a disturbed mentality, for what he has always had he still has, and there is no disturbance about it.

Faulty habits are a powerful factor in disturbing mentality, but I have tried to emphasize the importance of the injured structure of the central nervous system, which results in disturbed function.

About some of the so-called true psychoses which develop—did you ever see a profound melancholia which was not preceded at some time by profound debility, to which was added some shock? The debility injured structure to the extent that a shock caused the break. Did you ever see a case of severe mania which was not preceded by some depression and usually some gastric disturbance? Disturbed structure precedes and causes disturbed function, which in this case assumes a different type and is called mania.

We have been thinking of these things in a sort of theological way, without applying the same common-sense, cold-blooded reasoning to disturbed mental function that we have to other disturbed functions of the body. We make our diagnoses by classifying symptoms rather than by classifying causes.

DISCUSSION OF THE PAPER OF DR. DOUGLAS P. MURPHY*

Dr. J. T. Burrus, High Point:

I much appreciate this paper of Dr. Murphy's, and I think North Carolina is fortunate to have such a wonderful plant as Dr. Norris and Dr. Biggs and Dr. Murphy have at Rutherfordton.

A few years ago, when Dr. Kelly was sending out from his laboratory radium emanation tubes, we happened to fall into the use of a few of these. It was our observation that very little came from it, and later we

purchased 100 milligrams of radium. I believe that the radium solid itself gives very much better results than the radium emanation.

Now, as to the treatment of tumors of the face and inoperable tumors, carcinoma of the uterus, especially, starting with a cauliflower-like growth of the cervix, the uterus becoming fixed; it is unbelievable what can be done in handling this character of cases. We tried the emanation in a few of these cases. A few years ago it was said that a mother-in-law from North Carolina went over into Ten-

*Paper published in the May issue.

nessee to visit, and while there she contracted pneumonia and died. The head of the house where she was visiting wired the son-in-law inquiring how he should dispose of the body, whether he should embalm, cremate, or bury. The son-in-law wired back to do all three, to take no chances. That is just my position in cancer. My opinion is that in many of these inoperable cases of cancer, if you will give them a deep x-ray treatment, with the proper amount of penetration, and in the hands of an expert, you will get almost what you get from radium. Then follow that up with the radium salt or the radium emanation. I saw a thing happen a few years ago to which I wish to call your attention, and I want to ask you to try it—you will be surprised. In a case of inoperable carcinoma of the uterus the vagina was filled with a cauliflower-like formation. The patient was treated previously by radium; I do not know what the dose was. We used the x-ray treatment. After this, we went in with Tesla's current and fulgurated and coagulated all of this growth in the vagina, and it was removed with curette; then, using a little electrode through the speculum, planting it in the uterus, we simply endeavored to go all over the interior of the uterus and coagulate it. But be careful in using your Tesla current there; the diathermy current will give you much better results. Six months later I saw that uterus. This diagnosis was confirmed by section and microscope. This organ, which had been previously fixed, was loose, and hemorrhage had entirely ceased. The uterus was removed later by Wertheim's operation. The patient is alive and well today. I believe that cancer of the uterus can be cured; the trouble is that we are not going after it with all our forces. Take cancer of the jaw, of the antrum: by using coagulation, fulguration, using radium, using emanation, we can cure it. I believe we get just as much from x-ray, from the radium salt, from coagulation, from fulguration, as we get from radium emanations alone. That was the trouble with Kelly, if I may dare to criticize a man of his character: if Kelly had combined other agents with his emanations I think better, and far greater, would have been his results.

Dr. James W. Hunter, Norfolk:

I have considerable radium and have had considerable experience indirectly with radium emanation. We all forget that the radium emanation is buried, or that the radium itself is applied locally or in needles, and the amount of tissue directly affected by the whole strength of the radium is very limited. Whether we use it, or not, I certainly think that deep therapy (with emphasis on the deep) should be applied, as well.

Dr. W. Lowndes Peple, Richmond:

I have been very much interested in Dr. Murphy's paper, and I think he pointed out very clearly the indications for the use of radium emanations instead of the substance itself. He has shown that in certain anatomical locations it is impracticable to use anything but the emanations. One can not stick a metal tube in a man's tongue or his soft palate or the roof of his mouth; and to retain plaques in these locations is extremely difficult. In such places it is the only thing you can use with any degree of comfort and safety. Again, when you find an inoperable abdominal tumor, you do not want to leave something in there that you have to take out in three or four days, so there again is an indication for the emanations.

I do not think any of us know exactly what we are doing when we treat cancer with any agent now at our disposal. We know that heat—fire, the cautery—has been one of the best agents in the fight against cancer. We have all been astonished at the results accomplished in inoperable carcinoma of the face or of the uterus by thorough burning, but we do not know whether the heat did something to kill the cancer, or to the patient that enabled him to fight the cancer. You know in a burn we kick up a considerable leucocytosis around the burn, and I wonder whether the burning really destroys the cancer, or merely helps the patient to destroy it. When we say a case is very malignant, we do not know whether that man has a very bad cancer or very little resistance; and when we say, "Here is a mild case, with lots of fibrous tissue," may that not be merely evidence of the tremendous resistance that this patient had? So I believe in the use of all of these agents, for we still do not know exactly what we are doing, whether we are

destroying the growth, or whether we are helping nature to cure the growth. In the use of radium I work in conjunction with Dr. S. W. Budd, who is our physicist and who regulates the amount and the time it is to be used. We use the cautery first, and destroy as much tissue as we can with it. That gets out a mass of tissue that we need not work on with radium, and allows the radium to get to the base of the disease. I have the feeling, also, that the tremendous inflammatory reaction that is kicked up by the burning is one of the big elements in helping us.

Dr. A. L. Gray, Richmond:

The question of treatment of cervical carcinoma is one, of course, which is of vital interest to all of us, regardless of what special method we apply. Like Dr. Burrus, in his story of the fellow's mother-in-law, I think we ought to do them all, so as to make absolutely certain, as far as possible. Dr. Peple's method of cauterization, or electro-coagulation, is unquestionably better than any knife surgical procedure that we can follow, and his application of radium for its local effect is certainly, in my opinion, better than high voltage therapy with x-ray. If you add to those two, treatment by the 200,000 volt x-ray machine, I believe you have gone just about as far as there is any reason to go. So, to summarize: Destroy by heat or electro-coagulation; apply radium; and follow, for the deep wandering cells that may already have metastasized, with a thorough treatment from the outside by high voltage roentgen ray therapy.

As to treatment of cancer of the esophagus, I do not know whether any case is now surviving that was treated as long ago as three years. Dr. Douglas Quick, of New York, who is one of the best authorities on radium, mentioned as to the best method of treating carcinoma of the esophagus, that he had treated a number of them by various improved methods, by the application of radium through tubes, etc., but they were all dead. In America, stated a year ago, when questioned, I do not know that we have gotten any nearer the solution of carcinoma of the esophagus than we were years and years ago, before radium and x-ray were introduced.

Dr. T. A. Pitts, Columbia:

but I believe firmly that using radium and

I want to ask the essayist what the reaction and the outcome is in these cases under local anesthesia. Do you get a flare-up? Do you think you get metastases more readily than you do after electro-coagulation or some other method of destruction?

We have used the high voltage therapy. Incidentally, I might tell the doctor here that as far south as Columbia, we have gotten the radium emanation. He says it comes as radium and high voltage ray in the treatment of these conditions. I have no statistical proof, and my opinion is not worth much, far south as North Carolina. We have used x-ray together, in the treatment of the same malignancy, is a mistake. If you are going to use radium, use it to the utmost; allow a space of three weeks or more, and then use x-ray, but don't use radium at the same time as you use x-ray. I am sure that is a mistake.

Cancer is one of the biggest questions with which we have to deal, and we ought to fight it with every method possible. If the growth can be destroyed by surgery, remove it; if it can be destroyed by heat, that is the method of choice.

Question: Why not use x-ray and radium together in a case?

I thought I had made it clear that the results are all I have to go by. As I say, I have no statistical proof. I feel that the reaction is possibly less.

Dr. Fred M. Hodges, Richmond:

Dr. Peple has discussed the advisability of using a combination of electro-coagulation, radium, and the x-ray in advanced carcinoma of the cervix. If you have a small lesion, radium is probably all that is necessary. You get an eschar or complete destruction of all the tissues within a certain distance from the radium itself. If, however, there is metastasis in the broad ligaments, these cells must also be destroyed, if possible; and the x-ray or an external pack of radium is necessary if the treatment is to be thorough.

Dr. Murphy, closing:

Dr. Burrus talks about x-ray and radium. If he has studied the physics of radium, and knows what the alpha- and beta- and gamma-rays are, he knows the gamma rays are prac-

tically identical with the x-ray. The beta-rays from radium, which represent a smaller part, are far more frequent, but are far more efficacious at a short distance. The work of Murphy at the Rockefeller Institute, I think, has convincingly shown that the effect of radiation, either from radium or x-ray (but, in the case of his experiments, from x-ray), proves that the chief effect from the radium, except for local necrotic effect, where tissue is actually destroyed, is a stimulation of the tissue surrounding the malignant tumor, with an increase of the protecting substance, whatever they are, which themselves fight the tumor. If you apply x-ray or radium to a small lesion on the face, you not only kill the lesion, but replace the lesion by a scar, which is one of the most remarkable things x-ray or radium does. If you kill the lesion alone, you leave nothing there but an ulcer. So it seems that one of the effects of radium or x-ray is stimulation of the tissues around the tumor, which throw up a defense against the disease.

Another point is proper dosage. If you are not going to use it right, better leave it alone. If you use a dose of 1200 units when you ought to be using 3,000 units, you have no right to get up in a medical meeting and decry the use of radium. If you are going to use the emanation, you have no right to use it unless you know how to use it. You have no right to send to New York once in two years and buy spicules of emanation un-

less you know the kind of patient on whom to use it.

So far as our experience is concerned, we implant radium in very few cases. We do not implant it in more than four or five per cent, but when they come to us we have opportunity of deciding whether implantation is best or whether external radium is best. When we have malignant conditions in the mouth we implant it and use heavy packs externally. I believe we get better results in that way.

As to carcinoma of the cervix, I believe Dr. White is exactly right as to the use of radium and x-ray. Unless you kill every single cancer cell in the body, it can not be cured. When a patient comes to us, we never speak of a "cure." Carcinoma of the cervix, statistics show that the benefits, so far as actual mortality is concerned, are slightly in excess of those from operation.

Dr. James spoke of the depreciation of radium emanation. The deterioration is around 16 per cent a day.

Question: How about the first day?

It is 16 per cent every day; 16 per cent of what you have at the present time. With the salt itself there is a loss of half its value in 1700 years. The emanation decays more rapidly than the salt.

The radium emanation has very specific uses, but they are limited. That is the important thing to realize.

ACUTE SURGICAL DISEASES OF THE ABDOMEN FROM THE GENERAL PRACTITIONER'S VIEWPOINT

MALCOLM THOMPSON, M.D., Greenville, N. C.

The mortality and morbidity of the acute surgical abdomen is more largely influenced by the diagnostic ability and judgment of the physician in general practice than by all things else combined.

Nothing arises in the entire field of medicine where early diagnosis and prompt surgical intervention does more to save life or where vacillation and delay does quite so much to lose it.

Acute surgical abdominal diseases come on suddenly, almost always in the home, and in the onset the symptoms differentiating one particular disease from another are few and sometimes difficult to interpret. However, a careful history, urinalysis, blood count, temperature and pulse record, along with a study of the location and type of pain will usually decide what belongs to the surgeon and what to the medical man.

An examination of the chest and reflexes should never be forgotten, because referred pain from lobar pneumonias, diaphragmatic pleurisy or gastric crises from locomotor ataxias have caused abdominal surgery to come to patients who should have been spared surgical intervention.

Deep pressure and percussion over the left abdomen should be a matter of routine because this procedure not uncommonly elicits pain in an inflamed appendix and does not give pain in pulmonary disease or tabes.

Acidosis and abdominal symptoms from diabetes, nephritis with its ascitis, pain and dyspnea: lead poisoning with its abdominal crises have brought unnecessarily so many calls for surgical treatment that the general practitioner should always keep them in mind.

A positive diagnosis of appendicitis in pregnant women should not be made until the right ureter is catheterized.

Acute pelvic disease can usually be diagnosed by rectal and vaginal examination, and as a rule should be given palliative treatment. However, uterine hemorrhage incident to incomplete abortion and ectopic gestation should always be given over to the surgeon for prompt surgical attention.

Perforated peptic ulcer presents a picture which, that it may never be forgotten, needs to be seen just once. Immediate surgery in this condition is imperative.

Perforation from typhoid fever carries with it a hundred per cent mortality unless treated by immediate surgery. In fact the mortality from perforation in any part of the alimentary canal is measured by the promptness of adequate surgical intervention.

The practice of temporizing in intestinal obstruction from any cause has made its history one of high mortality. The physician who waits for stercoraceous vomiting to prove his diagnosis gives his patient only twenty chances out of a hundred to live as against eighty chances if operation is done early. The causes of intestinal obstruction are so many that it should be borne in mind as a probability in every acute surgical abdominal disease, and it should cause every physician to abstain from prescribing purgatives in acute surgical abdominal conditions. The treatment of intestinal obstruction is surgical, not medical. Strangulated hernia causes

death more often because of delay brought about by the physician's practice of attempting to reduce the hernia by taxis than from any other single cause. If the patient has not gotten relief by taxis as practiced by himself the physician should not depend upon this method of cure if by so doing operation is delayed. Volvulus, intussusception and acute mesenteric thrombosis are forms of intestinal obstruction in which diagnosis is seldom made until after the abdomen is opened, and when found should be treated surgically.

Cholecystitis is one of the few acute surgical abdominal conditions that does not demand immediate operation. Fowler's position, nothing by mouth, fluids by procto- and hypodermoclysis, heat to the abdomen, with morphine enough to keep the respiration below 17 per minute will usually be sufficient for the time being. But if after twelve hours fever continues to rise, the pulse becomes more rapid and the leucocyte count increases, operation is demanded; at which gangrene or empyema of the gall bladder or an acute pancreatitis is often found.

Acute pancreatitis independent of cholecystitis is sometimes seen. Recovery here lies only in immediate incision and drainage.

Appendicitis is a surgical disease. It is of interest and import to the general practitioner only in so far as its early diagnosis is concerned. Prompt diagnosis and early operation shows less than one per cent mortality but the mortality increases in accordance with every hour of inactivity incident to delaying surgical intervention.

Traumatisms causing an acute surgical abdomen can be divided into cases with an external wound and cases without an external wound. When an external wound is present it should be adequately exposed by a surgeon so that it can be positively ascertained whether or not the peritoneal cavity has been opened. If it has been opened its contents should be examined in detail and any injury found should be corrected. In cases without an external wound the chief concern is rupture of the various viscera. If the spleen, kidney, bladder or alimentary canal is ruptured it should be treated by immediate operation. A ruptured liver will heal spontaneously and it is only in cases where bleeding is continuous that operation is necessary.

SOME SUGGESTIONS IN REGARD TO MENTAL DEFECTIVES

W. H. DIXON, M.D.

Superintendent Caswell Training School, Kinston, N. C.

I have recently mailed a letter to the Welfare Workers of North Carolina requesting them to find out the number of mental defectives in the various schools of each county in the State. I suggested that they make inquiries of the principals and teachers of the private and public schools for this information. My object is to know the number so that we may shape our work at Caswell Training School to accommodate the largest number possible.

In regard to the classification, my opinion is, that they should be segregated into types as follows: moron, high grade imbecile, low grade imbecile and idiot. If this could be done, we could better train them according to their mental status. We are supposed here to take the trainable types. As every one knows, the idiot is not capable of any training. Just here I wish to state that we have in round numbers one hundred idiots at our institution that are untrainable for anything who could and should be taken care of by their individual county institutions. By this arrangement, we could fill their places with the trainable types, or this class of inmates should be colonized at our institution, so that they may be separate and apart from the other inmates. This could be done by having two dormitories added to the institution; one for the female idiot and the other for the male idiot. The overhead expense would not be increased. The only additional cost would be the erection of two buildings. The advantage in this arrangement would be better discipline among the mid-grade imbecile and moron. It also would remove the menace of them having to be thrown with the idiot. The above types feel more or less the menace of having to associate with the idiotic type. In my opinion, the low grade and mid-grade imbeciles should have instructors or caretakers for that particular type. We could better train, we could maintain better discipline, and we could make them more useful in the various industries teachable to their types.

There is another class in my opinion that

should be given some consideration, that is, the criminalistic type. They should be separated from the non-criminalistic or quiet inmates that we have, because of the fact that one with a criminal tendency will contaminate others and add to their number, especially if they are of the leader type. This condition exists both in the male and female wards.

Another phase is that of precaution. First of these is strict State marriage laws. When certificates are issued by the examining physician, let it be a real examination in the strictest sense of the word, both mentally and physically. Since I have been superintendent of Caswell Training School, I remember distinctly we had one girl that ran away, has since then been married and of course she went before some physician to get a marriage certificate. She easily acquired this and readily informed me that she was married. It is a fact that if physicians were more careful in giving certificates for marriage as required by law, this would, in a large measure, prohibit the increase of the mental defections.

Second: The proper enforcement of the sterilization law is another means of preventing the increase of mental defectives. I realize this is a debatable point and has given adequate grounds for discussion for and against such a law. For a law of this kind to be enforced in the State of North Carolina, it must first have public sentiment crystallized to the point that it could be properly enforced.

Third: If the public schools of North Carolina could secure specially trained teachers for the mental defectives, the type that has an intelligence quotient from 60 up to the border line (which is around 70), then this, in a large measure, would relieve the congestion at our institution. It is true that we have between 75 and 100 inmates here that with properly trained teachers in the graded schools of the State, could be taken care of almost as well as they are here. The only objection to this is the matter of segregation when they reach the state of adolescence, as this type seek to enter the state of matrimony

just as normals do. The only solution to this particular problem would be to sterilize these, whereupon they would become useful citizens.

There are quite a number of interesting

facts connected with this problem. I am reciting these few so that the public may have some idea of just how the mental defectives are affecting the people of our good State.

GROWTH DISTURBANCES IN THE EPIPHYSES OF LONG BONES*

O. L. MILLER, M.D., Charlotte and Gastonia

In the spring of 1923, while examining a child who had a mild, chronic osteomyelitis of the left tibia and left femur, I recognized, for the first time in my clinical experience, the longitudinal overgrowth of a diseased limb. The involved limb measured one and one-half inches longer than its fellow. I felt that it must be unusual, catalogued the condition in my mind, expecting to be on the alert for another case. (You recall how common it is to see a limb *shortened* by disease.)



1. J. C. Right infected femur shows approximately two inches overgrowth.

At the time the case referred to was seen, the following note was made in the clinical record: "It is an unusual phenomenon to see a diseased leg actually much longer than the well one. The left leg here is approximately two inches longer than the right. There has been an inflammatory disturbance of the epiphysis at the upper end of the left femur, and at the lower end of the left tibia, which probably accounts for this excessive growth."

Within three months after this note was made, Speed, of Chicago, brought out an article in *Surgery, Gynecology, and Obstetrics* reporting three cases in a paper he had recently read before the Chicago Surgical Society. The journal mentioned carried his discussion of the longitudinal overgrowth of long bones, as well as discussions by others. I got the impression that very likely the phenomenon was not so rare, but rarely observed, and I take the liberty of presenting this interesting clinical entity again, and showing a few cases in which I have observed its occurrence since 1923.

As Speed says living long bones grow in two general directions. They must increase in the transverse diameter to respond to the call of weight-bearing and the activities of life; they must increase in length to bring the individual to his mature stature. The first mentioned growth is a regular, steady thickening of the bone shafts and ends, compensatory in character, and so uniform is the process that little attention is paid to it. Some teach that the periosteum determines the limit of lateral growth.

Disturbances of growth of long bones in their longitudinal axes lead to skeletal

*Read before the 28th Annual Session of the Tri-State Medical Association, Fayetteville, N. C., February 16-17, 1926.



2. J. C. Patient showing increased length of the right lower extremity due to overgrowth of femur. Had an osteomyelitis for several years.

changes, involving the whole body and result in disability and disfigurement. They then assume surgical importance. If one bone in the forearm ceases growing, embarrassing deformity with deflection of the hand will result. Such a condition is seen in one of the cases reported here. The same condition may be seen at times in the leg and foot.

We recognize, then, in the epiphyses of long bones; disturbances, traumatic or infectious, which may play a part in undue lengthening or shortening of the member. Lengthening may take place without simultaneous increase in the transverse diameter of the bone. It may occur without increase in the size of the limb, except its length, and, as a

rule, the process tends to lengthen only that portion of the limb involved in the inflammatory disturbance, leaving the remainder, and the body as a whole, uninfluenced as to normal size.

We understand that certain common factors frequently influence the growth of adolescent bones,—the various diseases of bones, as rickets or osteomalacia, chronic or even acute illness, and untoward action of the various glands of internal secretion. This is usually, however, a symmetrical process. A unilateral enlargement of the whole body may occur, involving the bones of the head, chest, pelvis, arm, and leg. This is usually congenital. I have seen congenital overgrowth of one



3. G. H. Patient having a longer left leg. Overgrowth of femur and tibia. Both bones have had an osteomyelitis for several years.



4. R. W. Case of simple fracture in epiphysis of radius with stoppage of growth. Eight years after accident. Ulna not disturbed in growth.

leg and considered it localized gigantism. The long bone overgrowth we are reporting is different. This change is closely connected

with, and subsequent to inflammations of a varying degree and possibly trauma.

The rate of growth of plants may be considered as a chemical reaction which gives the mature organism as its end-product. Such an organism grows at a definite rate, which is, at any moment, proportional to the amount of growth yet to be made. These instances of bone overgrowth, then, must occur in children or adolescents who still have a certain amount of normal growth coming to them, but some stimulation as from the action of toxins of an inflammatory process in or near the growing part of the bone leads to length that overcomes the natural physiological limit, and growth goes on beyond any intended normal extent. It is not comparable to the wild growth infiltration of malignant tumor cells which go on to destroy the whole organism. While the length growth of the bone is somewhat out of hand, it is not deadly and soon reaches its limit.

The epiphysis of a long bone ossifies first at the end of the bone where the greatest increase in length takes place; namely, that end toward which the nutrient artery is directed. When growth has nearly ceased; there the epiphysis unites so that the epiphysis which unites last with the shaft is the one with the most active proliferation. Bone lengthening is rarer than bone shortening.



5. R. W. After resection of ulna to match the shortened radius.



6. R. W. Forearm before operation



7. R. W. Forearm after operation.

Speed, in his discussion of this phenomenon, expresses the opinion that the irritation which induces the long bone overgrowth must be indirect. He feels that if the infection or toxin directly stimulates the cartilage cells, we are more likely to have death of cells and stoppage of growth rather than proliferation. If this is the case, the question arises: If the irritation is indirect or hematogenous; then, why does it not affect epiphyses in the uninvolved bones of the other leg and be symmetrically distributed like pituitary bone changes—the pituitary secretion being a blood distributed agent?

I am inclined to feel that the cartilage cells do get direct irritation and stimulation and that the thing that explains why one bone lengthens and another shortens in the presence of infection is either the varying viru-

lence of the organism or the physical placement of the lesion in the medulla, as it relates to the epiphysis. One type of organism may be destructive in the shaft and still not be so virulent as another. When such infection approaches its natural boundary—the epiphysis—it becomes a stimulating irritant while a more profound infection may become a destructive irritant. Again, infection may be localized in the shaft some distance from the end, and the influence may quicken growth at the epiphyses, while another infection may burn the medulla from end to end and stunt the epiphyses. So the whole matter is somewhat problematical as to cause and we only know that it really happens.

Macewan has suggested that the long bones will experience an overgrowth from disuse. All of you have seen how tall and slender

some youths appear to get while resting in bed during a long illness. Sometimes, this is more apparent than real, due to muscle atrophy. Again, some of it is real and may be due to the loss of the proper physiological functioning of the limbs, which controls growth. In our cases of single limb overgrowth, some significance may be attached to the fact that this limb usually gets extra rest for quite a period, but, I am inclined to feel that infection itself plays the major part.

The theory is advanced that the epiphysis gets its growth stimulation from the unusual hyperemia attendant on walling off an infection and this is, no doubt, to a degree, true; but, it is difficult to separate this theory from direct irritation of the cartilage by an atten-

uated infection and the usual tissue changes immediately about such a process.

The treatment of this condition is probably no clearer than the etiology. Practically, it would seem to be the proper treatment of osteomyelitis and the earliest possible returning of a limb to its normal activities. One could bear in mind the possible asymmetrical bone changes in a prognosis. I would hardly think bone resection of the femur to equalize the length of legs indicated in any of my cases. Compensation for the short leg with a lift in the shoe is practical. Where the part normally has two bones, one may be resected to mate the other. Resection of forearm bones to equalize length is all right, when the bones have attained their major development.

GRACE HOSPITAL, BANNER ELK, N. C.:

A RURAL HOSPITAL

Grace Hospital is one of the departments of the Edgar Tufts Memorial Association, which is under the control of the Presbyterian Church in the U. S. (South). It is located in a rural mountain community in Avery county at 4,000 feet elevation, and is nine miles from a railroad station.

Nearly thirty years ago a young Presbyterian minister came to this isolated community and through his efforts a church, a mission school for girls and an orphanage were established at this place, but there were still other needs. A physician and hospital facilities were needed to care for so many children gathered together, and for the many people scattered among the mountain villages and coves, since the nearest hospital was 50 miles distant, and there was no physician near the school.

In 1910 a frame building was built as an emergency hospital and a physician secured. This house also served as the physician's home and dispensary, and a few rooms were set apart for patients' rooms and an operation room. At times the services of a practical nurse could be obtained, but much of the time the work had to be carried on without this help.

It was a small beginning, but even this has met a great need in a mountain section where it was difficult to reach other hospitals due to the distance and the condition of the road at that time; and in many cases of emergency it was perilous to make this journey.

Until 1922 the old building served as an emergency hospital, and at this time Mrs. Helen Hartley Jenkins of New York generously supplied the funds necessary to build a modern hospital. Today there stands a brick and reinforced concrete building where stood the frame house. It was opened for patients June 1, 1924.

It is a three-story fireproof building, and is provided with elevator service, steam heat, electric lights, and an x-ray machine. The hospital is situated near the Elk River, which serves as a source of power and water. It is a rural institution with city conveniences. Grandfather and Beech mountains contribute to the magnificent view.

The hospital has twenty beds, and it is already realized that the hospital should be much larger. Its capacity is usually taxed, except in cases of deep snows when it is almost impossible for patients to come in

from any distance.

Patients are drawn from the nine counties of Avery, Watauga, Mitchell, Yancey, Caldwell, Wilkes and McDowell, of Northwestern North Carolina; and Carter and Johnson counties of Northeastern Tennessee. One-third of the patients cared for during the year 1925 paid nothing.

The personnel of the hospital consists of two physicians, two graduate nurses, four pupil nurses, secretary, a housekeeper and her assistant, three laundrywomen and an orderly. A Training School for Nurses has been established and the curriculum required by the State Board of Examiners is being used. It is the plan of the institution to draw the pupil nurses from the nearby school or orphanage, training the mountain girls in this noble profession, and it is hoped that many of them will remain in the mountains to serve their people after they have finished their training. Our most urgent need at the present is a home for the nurses.

It is a step forward from the old emergency hospital to the new Memorial Hospital with its Training School, but there is still a need for development and expansion in order that these mountain people may have more efficient hospital service. This is a day of

better advantages for the mountain people. Consolidated schools and mission schools are replacing the small school of yesterday, and the roads, although not the best in the State, are being improved. Churches have been established. Better schools, improved roads, churches—then why should these people not have a sufficient number of physicians and efficient hospital service?

The members of Grace Hospital staff are not only interested in serving its own community, but is working for the establishment of hospitals in similar communities to meet similar needs.

Much interest is being manifested in medical and hospital conditions in rural communities, and in the problem of increasing the number of physicians in the more remote districts. There is an ever-increasing tendency for physicians to locate in cities where they can have the advantages of hospital facilities, and the lack of physicians in remote districts is becoming more deplorable each year. It is believed that rural hospitals located at strategic points would not only be a means of serving the 50,000,000 people in rural districts, but would be a means of bringing the physicians back to these people. Grace Hospital was established upon this belief.

PRESIDENT'S PAGE

A. J. CROWELL, M.D.

Address to the South Carolina Medical Association, meeting at Sumter in April

I am glad to be with you. I am coming again, whether invited or not. I am greatly interested in medical society work. In fact, my closest friends think I am rather cranky on the subject. What knowledge I have of medicine has been obtained largely by sitting around and absorbing at medical society meetings. What is true in my case, I believe, is true of all men who attend medical society meetings. It is a significant fact that our greatest medical men, in this or any other nation, are faithful in attending society meetings. We little fellows think we cannot afford to give time necessary to attend them yet men like the Mayos and others of their type attend every society meeting possible. One day of their time at home is more valuable than many of ours for a month. It seems to me that this is a good indication of the value of medical society work.

There are two kinds of medical societies,—the social and political and the scientific. We necessarily must have the legal and political. The social side is very pleasant indeed and no one enjoys this more than I. Both are necessary. We have certain educational and legal problems that must be handled by our State societies. Propaganda must be forwarded through them. We are now in the midst of an educational campaign for periodic health examinations. All such campaigns must be promulgated from our State societies. This means time consumed from the scientific program and considered business or political as each individual sees fit to term it. This educational work must be carried on in our county medical societies, State medical societies, as well as through our national medical society. The problem of periodic health examinations, spoken of by Dr. Crampton this morning, will be up in the house of delegates at Dallas next month. It was up last year and it will be there until greater interest is taken in these periodic health examinations. This means time taken from the scientific programs.

We also heard a great deal about child welfare work this morning. The educational

side of this is necessary. The election of members of the boards of medical examiners, boards of examiners for trained nurses, members of the boards of health, members to the national house of delegates, as well as officers of the State society;—all interfere with the scientific programs and detract from their usefulness. We have in this section of the country a society devoted exclusively to scientific work;—the Tri-State. We have nothing to do in a political way. We have no reports to make to, or receive from, any county, state or national organization, or State board of health. It is composed of members of the profession from the three states of South Carolina, North Carolina and Virginia. I believe we have the cream, or certainly a great many of the very best men in the three states. Next year we expect to meet in your midst—at Columbia. This year South Carolina did not come up to her usual standard or to what she is capable of doing. There was only one paper from South Carolina, thirteen from Virginia and fourteen from North Carolina. We are counting on you not only to be present next year, but to have scientific papers. We want your co-operation, not only in the preparation of papers, but also in securing an increase in your membership. This society is somewhat like the Southern Medical Association, in that we have many problems in common in the way of diseases peculiarly prevalent in this section and the best measures for their prevention, but different in that all the papers are read and discussed together. This gives opportunity to have symposiums covering a large field of medicine each year and thus broaden our knowledge in medicine. The natural tendency of the specialist is to concentrate. This means efficiency in his special line, but to be most efficient he must keep in touch with other branches of medicine. This society offers that advantage.

I bespeak for this association your hearty co-operation and support. Let it, be to these three states what the Southern Surgical Association is to the whole South.

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MEDICINE'S CONCERN WITH MAN'S KINSHIP TO OTHER ANIMALS

The members of the medical profession are more concerned for the prevention and cure of disease and pain than are those of any other group. This is not because we are by nature more humane than our brothers, although it can not be doubted that a sympathy for affliction tends to decide many a young man on choosing to devote his life to its relief. The main reason lies in our better acquaintance with the suffering, sorrow and misery of our neighbors, and our superior knowledge of the extent to which this is due to disease.

We know, too, of the self-sacrificing labors of our forebears, and the victories they have achieved; but many of us do not keep this knowledge in our thoughts. Only a few weeks ago the Charlotte Observer printed a letter written by Col. Wm. R. Myers, of this city, in 1850, which contains information of a rather startling character. A smallpox epidemic was prevailing, and, to quote: "All pursuits of the town are completely paralyzed. The spirits of our people are demoralized, * * * * * our town in the course of another week will be entirely *dispopulated*." And more than a half century had then passed since Jenner's demonstration to the world of the power of vaccination to prevent smallpox!

Since that time the doctors of the country

have been able to so far convince the general population of the value of this measure as to put it into practice with such effect as to make us wonder that such conditions could have existed only seventy-five years ago.

It was in the forties of the last century that Long first used ether, and Simpson introduced chloroform, as a general anesthetic.

Previous to that time a patient on whom it was necessary to do an amputation, a hernioplasty or a cystotomy was given a draught of opium and whiskey, tied to the table or held by stout assistants; and the horror proceeded. Woman bore her ten or twelve children, relieved not at all, and sustained only by her faith and courage, which, too often proved inadequate to the task.

It was the best we could do; but every doctor with a compassionate heart longed and worked to change all this.

When men who are now in the prime of life were boys, it was no uncommon thing for a family to go to the graveyard to bury a child dead of diphtheria and find on returning to the home that another had died of the same disease.

Young persons remember when typhoid was a regular summer visitant in every community and nearly half the families showed a vacant place in the circle because of it; and they remember the time when one bitten by a mad dog or punctured with a nail contaminated with the bacteria of lockjaw was doomed to a death the horrors of which can not be portrayed in words.

Naturally one would say that relief from any of these conditions would be joyfully welcomed; and it was so among all except those who, in the name of the gentle Christ, pronounced anathema on all who would seek amelioration of this hard lot, because pain and disease had been "divinely ordered" and the edict had gone forth "in sorrow shalt thou bring forth children"! It is painful to record that a few doctors, under the malign influence of this teaching, rejected the boon of anesthesia and declared that they knew not how to wield the knife except to an accompaniment of agonized shrieks.

The theologians have presented an almost united front against these advances. The Bishop of Worcester declared that vaccination against smallpox was "flying in the face

of Providence," and those in lesser posts vied with each other in pouring maledictions on the heads of Jenner and his converts; anesthesia was denounced as a heretical abomination; and children continue to die of rabies, tetanus and diphtheria amid incantations and incense.

In late years there had been noted a marked tendency toward tolerance of the progress of medical science; indeed there had come about a general feeling that ecclesiasticism had recognized the fact that science in general, and medical science in particular, was in no sense hostile to religion and only desired that the leaders in the latter realm not hinder us in our efforts to cure, relieve and comfort; but rather to aid us by supplying comfort such as only a truly religious man or woman can give.

Recent developments make it appear that this assumption was premature, and cause apprehension of a partial return to the conditions of the Dark Ages; when, because of suppression of science, the world well-nigh perished "for want of the light it had so wantonly extinguished."

So long as it was accepted as unquestionably true that man was not akin to other animals, no serious attempts were made to investigate disease processes in these, and to translate the results to man. This was inevitable. But once it was demonstrated that cowpox inoculations could protect a human being from smallpox, a new vista opened to the gaze of thinking medical men. From this idea has proceeded the thought and the labor which has brought a relief from suffering and a freeing from disease, such as Thomas Jefferson, prophet though he was, could never have foreseen,—and all in the course of a little more than a hundred years. It might be truly said that Medicine has accomplished more in the past fifty years than in all the centuries before, and that practically every bit of this work has been carried on through animal experimentation and has necessarily had as its basis the fundamental idea of the kinship of man and other animals.

Moses was undoubtedly wise in the wisdom of his time and some of his teaching we have neglected to our loss; but doctors can no more accept his expressions on hygiene, quarantine and the diagnosis and management of leprosy, insanity and pregnancy,

than can judges administer the law after the order of the system which permitted "The trial of jealousy," and the "Bill of divorcement;" than can astronomers use the Book of Joshua as a text; than present day religious leaders can espouse the cause of polygamy and concubinage, or teach that a man should be stoned to death for gathering sticks on the Sabbath.

It is very probable that there is not a man in the whole world so devoid of compassion that he could tolerate life for a day did he bear clearly in mind all of the wretchedness of his fellows. Is not then a most serious obligation imposed on the profession whose members know most about this still appalling load, and of how greatly it has been lightened through the ages by the labors of medical men, to concern and bestir themselves that nothing of this heritage of good be lost, that no obstruction be placed in the way of this beneficent work, which, unimpeded, promises to free the race from disease?

THE DOCTORS' "SERVICE OF SUPPLY"

One of the great pharmaceutical houses of the country recently completed its fiftieth year of supplying soldiers in the warfare against disease with munitions on which they could rely. In the World War much sport was made, in a good-natured way, of the S. O. S.; there was even a couplet which ran "Mother, take down your service flag;

Your son's in the S. O. S.;" but this ignominy was shared by the Medical Corps, and all knew that without these organizations no battles could be won.

To houses whose labels have come to mean that the pharmaceutical and biological products to which they are attached are the best which can be produced, Medicine owes a great debt, and one of which it is somewhat neglecting the payment.

It is said that the first disaster to the Russian arms in the late war was caused by shells being sent to the front which did not fit the guns. Whether this was occasioned by treachery or carelessness, the results were defeat, loss of confidence in the service of supply, and ruin.

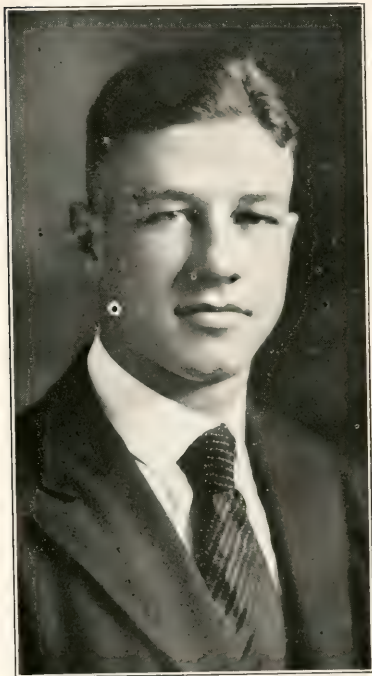
So many factors enter into the treatment of every illness that a doctor can not so

easily establish the fact that a certain remedy does not fit the case. This makes him almost entirely dependent on the skill and honesty of the manufacturers. This being self-evident, it is rather remarkable to note the trustfulness with which some doctors prescribe or purchase drugs of firms with no reputation, or, in some instances, with reputations they would be much better off without. Surely there remains a sufficiency of unknown factors in any serious illness, without having to wonder as to the potency of the remedy administered.

This is one of the many matters which can best be adjusted by the working together of doctors and pharmacists. Each can give

the other information on the disproportion of disappointments following the use of non-descript products; consideration in the light of all the evidence will free the druggist's shelves of much dross, and doctors will show consideration for patient, druggist and reason by accepting a product of *any one* of the houses which have demonstrated their superiority over many years.

We felicitate Lilly on a half century of success. Without the Service of Supply maintained by the number of such houses conducting their businesses on this high order, Medicine would be helpless, and might be dangerous.



DOCTOR GORDON BRYAN CROWELL

1895-1926

The "pains of death" is only a figure of speech. Death has no natural terrors. When

it comes peacefully, after Life has gone through its cycle, it is as welcome as an easy bed at evening.

But when a young man is cut down in his prime we can not welcome the event; we must rather wonder at the apparent indifference with which are stricken the useful and the useless, the worker and the drone, the wise and the simple.

On May 9 Dr. Gordon Crowell of Lincoln died, lacking a few months of thirty-one years. Till a few weeks before, he was in the full vigor of a strong young manhood, and there was every promise of the realization of his and his father's high hopes for a long and useful period of honored service.

Dr. Crowell was the eldest son of Dr. and Mrs. L. A. Crowell. In June, 1921, he was married to Miss Frances Geitner of Hickory. Surviving are his widow, one child, Frances, and another which will be posthumous, his father and mother and several brothers and sisters.

Dr. Crowell was educated in the public schools of Lincolnton and later attended the University of North Carolina where he obtained the A.B. degree. Inheriting a love of medicine from his father and his grandfather, early in life he chose this as his profession and in 1922 received his degree in medicine from the University of Pennsylvania.

The same year he came to Lincolnton to become associated with his father, Dr. L. A. Crowell, in the management of the Lincoln Hospital, an institution which was begun by

the elder Dr. Crowell and which is today recognized as one of the leading hospitals in this section.

Some weeks ago Dr. Crowell, with his father and others, organized the Caldwell Hospital at Lenoir and it was his intention as soon as the institution was opened to give part of his time to the work in that place.

Dr. Crowell was a member of the board of stewards of the Methodist church and was

interested in all things pertaining to the improvement of his community.

While he lived Dr. Crowell was loved and honored; when he died the population of his native town, headed by its doctors, followed him to his grave.

We offer to the widow, the babes and parents the sympathy of the doctors of North Carolina.

DEPARTMENTS

LABORATORIES

HARVEY P. BARRET, M.D., *Editor*

Charlotte

EXAMINING SECRETIONS, ETC., WITH THE NAKED EYE

In this day and time much attention is paid to laboratory examinations and their value as aids in the diagnosis of disease. Some say that too much dependence is put on the laboratory. The dependence placed on laboratory work may, it is true, be carried to extremes.

On the one hand is the man who relies solely on the laboratory in making a diagnosis, on the other hand is the man who pays little or no attention to laboratory examinations.

In laboratory work as in other lines there is always a happy medium.

It seems worth while to the editor of this department to write a series of articles on the gross or macroscopic examination of the various body fluids, secretions and excretions, such as blood, urine, sputum, feces, etc., to show the value of inspection in addition to the use of various chemical and microscopic tests as aids in the diagnosis of various disease conditions. It should not be understood that inspection can take the place of laboratory examinations, nor is the writer in any way trying to belittle the value of the laboratory as an aid in diagnosis. These articles will be written merely to show what

tain, is bewildering. Some of these are very information can be obtained from a careful macroscopic examination in addition to the usual chemical and other tests.

We can not better express the value of inspection in the examination of one substance, at least, namely, the sputum, than to quote from Emerson on this subject.

"The examination of the sputum is fast becoming a lost art. * * * * * Today a sputum examination seldom means more than the search for the bacillus tuberculosis. * * * * * That the average clinician now does not even glance at fresh sputum is proven by the presence on the market of red paper sputum cups only; red, so that the patient may not notice that he is expectorating blood; red of such a tint that the doctor cannot see the many delicate shades and characteristics of sputum which would have taught our fathers in medicine much of interest and value concerning the patient. There certainly are many other diseases of the lungs than tuberculosis and even in that one disease our duty involves not only an accurate diagnosis but an accurate prognosis as well and that we may be able to do this we must follow our case in its changes from day to day. For this reason a wise interpretation of the daily sputum changes is more important than a report from a State laboratory or a roentgenological department. * * * * * The variety of colors, of physical and chemical characteristics and of structures, which the sputum may present or con-

important, more are negligible; which are which, the clinician should know."

In future articles the gross examination of the urine, sputum, feces, blood, stomach contents and other substances will be taken up and the knowledge to be obtained from such examinations discussed. This should be of value not only to the general practitioner who is unfortunate enough to have no laboratory facilities, but to those who use the laboratory as well.

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*

Richmond

ON THINKING RATHER THAN FEELING

In a recent number of the *Mental Hygiene Bulletin* an editorial writer discourses under the caption: *On Thinking with the Emotions*, and from Voltaire quotes: "Thinking is so difficult. That is why most of us prefer to pass judgments."

The observation of any man who professes to think at all will bring forth confirmatory evidence of the truthfulness of the great Frenchman's statement. The death of William Jennings Bryan called forth from me the opinion that his life had been dominated and directed by his emotions rather than by his intellect. The tendency today is to reach a decision, to adopt a course of action, to take a definite stand not as the result of a careful and dispassionate analysis of the situation, but because of the individual's feeling about the problem. The consequence is that the atmosphere is filled with loud but meaningless mouthings about the grave problems of life. The attempt to think things out is often hurtful to one's good opinion of one's self. It is not easy to weigh facts against each other and to make recourse to reason and judgment in reaching a conclusion. Not infrequently the world of reality in which we all live is unconsciously replaced in our imagination by a world of unreality in which we attempt to live. Sometimes I think insanity to be only an attempt to replace the real by the unreal—to substitute for the everyday world the wished-for world, in which life would be more or less idyllic. But we have to live our lives in the world around

us. We cannot live either comfortably or successfully without understanding in some degree the environment in which we live, and we cannot understand problems unless we are willing to see them naked, as they are. Whether the world be good or bad may be debatable, but there can be no discussion of the fact that in it we must live until translated to another habitation. Individual thinking seems to me to necessitate a degree of individual isolation, physical inactivity, an inclination to contemplation. Thinking represents work. It means the expenditure of energy. It requires a high degree of courage to think things out and to stand up for the conclusions one has reached, because such intellectual activity generally leads away from the mass. Mass physical activity, so necessary during the war, has apparently left behind as its heir mass mental or emotional activity. If there be any thinking done today it is by groups and not by individuals. And some of the outpourings which are supposed to call for hand-clappings are so puerile as to be pathetic. A good many years ago a statesman of one of our great political parties based his admiration of the most outstanding and vocal member of his party upon the latter's enthusiasm at having discovered the ten commandments. Leadership is needed for purposes of instruction. Feeling furnishes good driving power, but it is without steering apparatus. People need to be taught that feeling is not thinking. The search for truth can be carried on by the mind only, and truth is the only lamp that has lighted the pathway leading to progress.

PSYCHIATRY IN SING-SING

Announcement is made that Governor Smith of New York and the budget commission of that State have agreed that a fund of \$40,000 be set aside for the equipment and the maintenance of a psychiatric clinic in Sing-Sing prison. A number of years ago Doctor Bernard Glueck, a well-known psychiatrist, was stationed at Sing-Sing prison and he made a study of the mental condition of all the admissions to the prison for the greater part of a year. This study of Doctor Glueck's represented, I believe, pioneer work of this kind in the prison field. The statement that the investigation of the mental



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condition and the personality makeup of incoming prisoners is going to be resumed will be heartening to those engaged in prison work. Crime is probably an expression of some quality that does not reside in the average individual, and it is time that a dignified, unbiased, and scientific effort were made to find out just what crime is. It used to be thought that so-called craziness was only meanness. For centuries the medical profession treated the insane upon that assumption. But about a hundred and fifty years ago some Quakers in England, laymen, too, thought differently about the matter, and as a result of that new conception of insanity the York Retreat was founded in England. The notion actuating those Quakers was that so-called insane people were not mean, but were sick in their minds. During the reign of terror in France Pinel was of the same opinion, and at the risk of sacrificing his own life by advocating such unheard-of treatment he unshackled the insane in Paris. From those two events the humane and the scientific conception of the treatment of the mentally disordered dates. We are slowly coming to the conclusion that the present method of dealing with crime is only milling around in a circle. In thus dealing with a great sociologic and economic problem we are getting nowhere at all. Mayhap the clinic at Sing-Sing will eventually revolutionize our attitude toward crime, even as the work at the York Retreat and Pinel's at La Salpetriere brought about an everlasting reformation in the treatment of the insane.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

"RENAL RICKETS"

The term used as the title of this article is new to medical literature. It is a condition described by Ashcraft (G. V.), Anatomy Department, Manchester University, and reported by him in the April issue of *The Journal of Bone and Joint Surgery*. He states that the first association of albuminuria with rickets was made by Clement Lucas in 1883. In 1901, Lyon recorded a case of infantilism associated with renal fibrosis. Nothing further was then written on the related subjects until 1911, since when a number of clinicians

have made contributions. Of late years, various workers have noted some connection between rachitic deformities and kidney disease. The author's studies were made on a series of 24 cases seen at Ancoats Hospital, Manchester, since 1921. He reports in detail one case of a dwarfish adolescent individual, and presents the general conclusions of his studies as follows:

"The clinical picture is one of the onset at puberty of deformities of the late rickets type, associated with a profound muscular asthenia; pallor; stunting without infantilism; a low specific gravity urine, pale in color and containing albumin; a notable absence of edema and cardio-vascular change; a negative Wassermann; a negative Loewi, and a negative Goetsch test.

The x-ray picture is one of rarefaction and metaphyseal abnormality, hazy porosis, enlargement and lack of cortex, associated with some rachitic changes at the epiphyseal line.

The post-mortem picture is one of chronic interstitial nephritis associated with fibrosis of the suprarenal gland and an inactive thyroid gland.

The degree of renal involvement roughly parallels the degree of clinical and roentgenographic abnormality. It is to the association of the typical clinical picture, the typical x-ray picture, and definite renal function that the term renal rickets has been applied.

While the kidney lesion may be responsible for certain of the findings such as albuminuria, nephritic signs and symptoms, and death from uremia, the greater part of the picture is due to some cause other than deficient renal function, and I should like to suggest that this other cause may be deficiency of the suprarenal gland.

A number of patients presenting the renal rickets picture had had operations, usually some form of osteotomy, and it was constantly found that the results of these operations were bad, and in some cases disastrous. The legs, after being straight for a short time, rapidly gave way; deformity was again produced, and usually was of a much grosser type than had been present before operation. In several cases the history was obtained that the patient had never walked since operation. Apart from this, operation, or more probably the administration of an anesthetic, is attended with considerable im-

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EYE, EAR, NOSE and THROAT

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mediate risk of life. The literature contains several instances in which operation precipitated an acute attack of uremia from which the patient died within a few days. Assuming that osteotomy is not done where the roentgenogram shows signs of active rickets, the following would contraindicate operation:

(1) Definite or suspected renal inefficiency.

(2) A roentgen-ray appearance typical of renal rickets, in particular the fuzzy metaphyseal porosis

(3) The presence of muscular asthenia

(4) A urine of persistently low specific gravity, containing albumin.

Where any of these findings are present, operation is likely to be a disaster, and at the best only a poor result will be obtained. The tendency of the disease to begin about puberty and the tendency of operation to precipitate its onset in a predisposed person suggest that if there is any evidence, clinical or roentgenographic, of the renal rickets type, it is advisable to defer operation for some years, until the time of puberty is past and the endocrine system not so likely to break down, and until the patient has been under observation for a considerable period of time. It is recommended that during this probation period clinical examination, measurements of deformities, roentgenographic examination, and renal efficiency tests should be performed at intervals. The clinical appearance of this class of case is typical, and the well-developed ones are easily picked out. It is the milder cases where there is only a suggestion of the renal rickets picture, that are likely to be overlooked, and it is for these that a plea is made that they should be given very great consideration before osteotomy is advised. It is suggested that before an adolescent with bone deformity comes to operation renal function tests should be carried out.

The treatment which was given to the cases of renal rickets and to those of similar nature included cod-liver oil; calcium lactate in small doses, not so much in the hope of improving any deficiency of calcium, as for its beneficial effect in such dosage on the albuminuria of adolescence; and thyroid extract, where there was hypothyroidism. In addition to drug treatment the patients received courses in massage and remedial exercises. It was found that under such a regime

the disease appeared to be arrested. The increase of the deformity was stopped and the patient's general condition improved, with ability to walk much better, and the muscular asthenia was strikingly diminished. Some cases showed improvement in the condition of the bones as seen in the roentgenogram, and in some there was a possible diminution in the degree of the deformity. This latter, however, was not usual, and was perhaps not to be expected.

The tendency of patients with chronic interstitial nephritis with stunting and bone deformity has in general been found to be progressively down-hill, and usually between twenty and thirty years of age they come to a fatal end from uremia. It is too early as yet to say whether the arrest of the disease, and improvement produced by this line of treatment, will be permanent or not.

Renal rickets is a condition in which bone deformity of the late rickets type is associated with renal disease. An investigation of this type of case has shown that 33 per cent have definite renal inefficiency, and 54 per cent reveal some renal defect. Sufficient evidence has been found to warrant the suggestion that the disease may be due to a fibrosis of the supra-renal gland."

RADIOLOGY

JOHN D. MACRAE, M.D., *Editor*
Asheville

X-RAY SERVICE IN HOSPITALS OF 50 TO 100 BEDS

It has become necessary for hospitals to equip and maintain x-ray departments for the convenience of their staff members in order that they may give the best service to their patients.

The American College of Surgeons collaborating with the American College of Radiologists has determined upon a minimum x-ray equipment for standardized hospitals of 50 beds and upward.

The following lists of minimum apparatus and equipment requirements for a standardized hospital of 50 beds or more was offered to the Board of Regents of the American College of Surgeons by a committee appointed by President G. E. Pfahler, of the Ameri-

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can College of Radiologists in June, 1924.

In at least 400 square feet of floor space, properly lighted and ventilated, free from dampness and otherwise properly protected from electrical and x-ray dangers, and conveniently located in relation to the professional services, there should be placed at least the following:

One interrupterless transformer, of 5 K. W. or more capacity, with both rheostat and auto-transformer control, and preferably with two milliamperemeters.

Coolidge tubes, of universal and radiator type.

Upright and horizontal fluoroscope and x-ray table equipped with tubestand, or a combination tilt table with facilities for fluoroscopic and radiographic work above and below the table and in vertical position.

One Potter-Bucky diaphragm, preferably attached permanently to the x-ray table.

Upright plate changer for stereoscopic chest work (this may be incorporated in the combination table).

Tunnel plate changer for ordinary stereoscopic work.

Stereoscope and viewing box.

Two or more cassettes of each of the following sizes: 8x10 inches, 10x12 inches, and 14x17 inches, with permanently attached intensifying screens.

One set of dark room equipment.

Lead rubber protective gloves, aprons, goggles, time clock, and minor accessories.

For 100 beds and up:

A more powerful interrupterless transformer than above noted.

Where therapeutic work is approved and a properly trained medical radiologist is available, 200-000-volt x-ray equipment for deep therapy may be added.

A minimum of 650 square feet of floor space.

Table with Potter-Bucky diaphragm permanently attached is highly desirable.

Intensifying screens: 6 cassettes 8x10 inches, 6 cassettes 10x12 inches, and 4 cassettes 14x17 inches, all double and permanently attached.

Eye localizer and charts.

Fluoroscopic bonnet for foreign body and fracture manipulations necessary in operating room.

The committee was not asked to report on

any other phases of the radiological service than the equipment.

It is useless and positively dangerous to undertake x-ray therapy unless the physician in charge of the department has had special training in therapeutic applications of the x-ray. For those hospitals not yet able to provide a physician for this work, x-ray therapy should not be undertaken at all.

The provision of a portable or bedside unit is one too little appreciated in most hospitals. This unit may be in such form that it can be used for work outside the hospital,—in the home, wherever electrical current is available. Too much fracture work is done in the home without x-ray control.

The American College of Surgeons has made a very important forward move in incorporating this statement in the minimum standard. This supervision by a physician roentgenologist is discussed at some length in my (Dr. J. T. Case) paper of last year, already referred to, but we may with profit once more emphasize that this supervision is necessary not only from the standpoint of administration and the carrying on of complicated technic, but particularly on account of the interpretation of findings which can be properly done only by such a trained person. Even in those small communities where it is as yet impossible to find a man specializing in roentgenology to take charge of the x-ray work, it is quite feasible for the members of the staff to pool their interests and select one of their number to devote special attention to this matter, and take definite steps to improve his ability to interpret x-ray findings. As already mentioned, it is out of the question to consider the matter of x-ray treatment by anyone not a physician, and no physician in his right mind will dare to undertake x-ray therapy unless he has had special training in this work. Otherwise one of two things is almost sure to happen: either he will lean so far to the safe side that his therapeutic endeavors will have little or no effect, or he will damage enough patients to shortly put an end to his therapeutic essay."

From an article "A Minimum Standard for X-ray Service in a Hospital," by Dr. James T. Case in the September, 1925, "Radiology."

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UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*
Charlotte

THE MANAGEMENT OF ACUTE EPIDIDYMITIS WITH SPECIAL REFERENCE TO PREVENTION

The epididymi, on account of their anatomical position, are much more accessible than the hidden portions of the seminal tract and therefore we know much more clinically about epididymitis than we do about seminal vesiculitis, for example

The epididymis is divided into three portions, head or globus major, body, and tail or globus minor. Infection of the epididymis is very common and occurs entirely too often both as an ordinary complication of a posterior urethritis, following simple instrumentation or as a result of prostatectomy with or without instrumentation following the operation. The gonococcus, staphylococcus, and the colon bacillus are the most common offending organisms and usually travel by contiguity along the musoca, by the lymphatics or by the blood stream. Acute epididymitis sometimes follows a strain as lifting a heavy object or a blow. This type is usually unaccompanied by any signs of a urethritis. Such cases probably represent examples of a hidden focus of infection in the lower seminal tract, but they may be due to a blood stream infection.

The differential diagnosis between orchitis and epididymitis seems to be difficult for most physicians and we frequently have a patient referred with a simple acute epididymitis diagnosed as orchitis. Acute infections, unless they are blood-borne, rarely invade the testis and acute inflammation of the scrotal contents usually involve the epididymis. Careful palpation and study of the case will usually indicate which organ is inflamed.

Epididymitis occurs in from twelve to fifteen per cent of gonorrheal infections of the posterior urethra and is not uncommon in any infection of the lower seminal tract. The management of this group of cases constitutes a problem of great importance to the general practitioner as well as the genito-urinary surgeon, for we all are called on to treat gonorrhea and therefore we all see and treat its complications.

The prevention of acute epididymitis is a worthy study in itself and should be given more thought than has been given. In acute

inflammations of the posterior urethra do not add insult to injury by traumatizing an already inflamed urethra. If the scrotum is redundant and the testicles hang low, suspend them as a precaution. Do not massage the prostate or manipulate in the region of the seminal vesicles. Do not force any fluid into the posterior urethra either by gravity or with a syringe. Any one of the above certainly predispose to acute epididymitis.

Palliative Treatment—Absolute rest in bed with the scrotum strapped with adhesive, ice cap to the acutely inflamed epididymis give the best results in our hands. Laxatives, water copiously, and codeine or morphine for severe pain are general directions given for hospital care. Intravenous mercurochrome, in selected cases, is indicated and has been given extensively in our clinic by Dr. Claude B. Squires with very good results.

Operative Treatment—When to advise operation in acute epididymitis is quite perplexing and no definite rule can be given. To advise routine operation is wrong and to say epididymotomy is never indicated is equally unjust to the patient. In our experience, suppuration is common, and where we have definite abscess formation complete evacuation of the pus and free drainage gives splendid results. The infection usually clears up rapidly and the patient can early resume the necessary treatment to perfect a complete cure.

EAR, EYE, NOSE AND THROAT

HENRY L. SLOAN, M.D., *Editor*
Charlotte

CONCERNING GLAUCOMA SIMPLEX

Chronic simple glaucoma is a difficult problem in every community. Acute congestive glaucoma has a sudden, almost dramatic, onset with severe pain and inflammation of the eye. This causes the patient to summon his physician immediately. Not so with chronic simple glaucoma. The latter is so insidious in onset and so devoid of striking symptoms that it may stealthily destroy the patient's vision without attracting serious attention, and quite frequently it escapes the notice of the physician. In fact the most careful oculist will occasionally fail to detect its presence even after a painstaking routine examination. Eternal vigilance and the greatest care must be practiced by the ophthalmologist. Failure to detect glaucoma in

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its incipency will almost certainly lead to irreparable loss of vision. Of such service is the ophthalmologist's daily privilege and joy.

Every presbyopic patient should be considered potentially glaucomatous. A patient of presbyopic age finds something wrong with his vision. He thinks he needs glasses and consults an optician, or maybe an oculist, who finds that glasses will improve his vision to normal, or near normal. Glasses are prescribed. In a few months visual disturbance recurs. New glasses are given. The patient does not know that central vision may remain good until the last in this disease. Certainly the oculist should know this and the patient given the benefit of careful routine examination of his eyes. The optician is not required to know.

The general physician should know the dangers of carelessness in this connection. It is his duty to direct his patients to one who will do a systematic examination, so that any early pathological changes may be discovered. Some of us fall into the careless habit of "just fitting glasses," and lose sight of the great individual responsibility that falls unmistakably on the oculist in the case of every patient that comes to his office. No practice is more blameworthy than for the oculist to let himself fall into the habit of trying to see as many patients as he can a day. He should rather exercise the precaution to limit the number of cases to that which he can give the time requisite for a careful systematic examination and treat with intelligence.

It is trite to say that no oculist should allow a patient to pass through his hands without a careful ophthalmoscopic examination. The diagnosis of optic nerve atrophy should never be made without careful consideration as to the presence of glaucoma. Pathological changes in the ocular media may obscure the disc. If there is the least suspicion of its presence, tonometric readings should be made, not once, but many times; visual fields should be taken, a careful search being made for the characteristic enlargement of the blind spot and for the characteristic scotomata.

This examination may have to be repeated many times for the exclusion of glaucoma.

When the diagnosis of glaucoma is established, early treatment must be instituted,

and the earlier this is done the better the chance of success. The patient should have it impressed upon his mind at the outset that he will need the care of an oculist for the rest of his life. Constitutional treatment is important in all these cases.

Many cases of glaucoma simplex are overlooked through haste. Most often it comes from the patient's seeking glasses at the hands of the optician. Three patients consulted me during the last ten days with total loss of vision, the victims of simple glaucoma. These patients had been seen by physicians who had failed to recognize their needs. Certainly no oculist should be guilty of such indifference to responsibility. If discovered early, the great majority of cases can be benefited a great deal; many can, with the proper treatment, have their vision conserved for life.

DERMATOLOGY

JOSEPH A. ELLIOTT, M.D., *Editor*
Charlotte

THE STANDARDIZED COMPLEMENT FIXATION TEST FOR SYPHILIS

A report of as much importance to the patient and his physician, as is usually true with the so-called "Wassermann reaction," should mean the same the world around. In view of the large number of modifications of the complement fixation test for syphilis, an attempt at standardizing a method so that it would mean the same the country over, is a very worthy and important undertaking.

The fundamental research that has been done by Kolmer and his colleagues, finally eventuated in a standard test, which was the composite of all the valuable features determined by their experimental work.

Upon publication of this standard method, they were met with a great deal of adverse criticism. Many serologists complained that the technique was too laborious and too time consuming; others that sufficient provision had not been made for taking care of the natural anti-sheep amboceptor, also that the indicator hemolytic system was not sensitive enough. Some even objected to the antigen as not being sensitive enough and one that gives false negatives.

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the final publication (1922) of the method, there has been a great change in the attitude of these critics. This has been especially striking at the meetings of the American Society of Clinical Pathologists, where this subject has been presented repeatedly, formally in papers and informally in numerous discussions. There has been a distinct change in the attitude of most of the objecting members of this body, especially such that now the Kolmer technique is rapidly coming into its own. It is becoming more popular in all parts of the country. As experience tries it out, more serologists are becoming enthusiastic in its support.

In our experience with this technique during the past four years, we have learned to value the method highly and we believe that it gives distinctly worth while additional information, especially when we are using the quantitative test, as a guide to treatment.

One of the most valuable features of the new technique is the addition of a very satisfactory antigen and a very practical adjustment of the hemolytic system. While it does consume time to perform the test properly (and especially is this true of the preliminary titrations) it takes very little longer than any other test with ice box fixation. At first glance the technique looks laborious, but upon full acquaintanceship with it, the serological technician soon learns to prefer it above all other methods. That has invariably been our experience.

In a subsequent clinical and experimental study of the specificity of the Kolmer test, the collaborators concluded:

(1) Falsely negative reactions may occur in cases of "extremely latent" syphilis. (This is true with any technique because the coincidence of a positive complement fixation test with a latent syphilis occurs much less frequently than it does in the more active or earlier forms of the disease. We have been impressed with the extreme sensitiveness of the new antigen and we have exceptional opportunity to check closely the clinical with the serological examination.)

(2) Falsely positive reactions are usually due to errors in technique. (We have found no false positives during our experience with this test.)

(3) It does not yield falsely positive reactions with the sera of experimental animals.

(4) The new test does not give falsely positive reactions with the sera of non-syphilitic individuals with acute and chronic tuberculosis; acute and chronic malaria; in advanced pregnancy; advanced diabetes; advanced nephritis; acute pneumonia; acute scarlet fever or with jaundice, due to the non-syphilitic involvement of the liver and its bile ducts.

We believe that this technique is by far the best that has been advanced and advocated as a standard test the world over. It appears that the clinical pathologists and serologists throughout the United States are coming to this same conclusion and that as time goes on more and more of them will use it as the foundation complement fixation test for syphilis. It is only by the universal adoption of a truly standardized method, that the serological examination for syphilis may come to mean the same in all parts of the country.

L. C. Todd, M.D.

GYNECOLOGY AND OBSTETRICS

ROBT. E. SEIBELS, M.D., *Editor*
Columbia

THE LOW CERVICAL CESARIAN SECTION

A type of low incision was advocated and used by Oslander of Goettingen in 1805 and was variously modified by Joerg, Baudelocque the Younger, Physick of Philadelphia and in 1870 by T. Gaillard Thomas of New York. The low incision made its appeal by obviating the necessity for opening the peritoneal cavity—a point of supreme importance in the pre-antiseptic days—for the operation was extra-peritoneal—and also as the danger from either primary or secondary hemorrhage was diminished. The technic was not easy at best and the method often involved technical difficulties that were nearly insurmountable.

In 1876, Porro advocated the removal of the body of the uterus after extraction of the fetus and the suturing of the stump to the lower end of the incision. This step did away with the dangers that the Thomas procedure sought to obviate, and was in addition much easier of accomplishment. But it left the sloughing cervix in the abdominal wound and prolonged convalescence was its bugbear.

The Sanger method was introduced in 1882 and its fundamental surgical principles made

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- Therapeutic Gazette**
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their instant and lasting appeal. To him is due the operation of abdominal hysterotomy as performed today, the so-called classical operation, with its rigid asepsis and firm wound suture. This operation is obviously to be reserved for the clean cases, for the opening of the sinuses of the uterus and of the peritoneal cavity in the face of infected or even of potentially infected amniotic fluid, would be attempted only by the ignorant, or the foolhardy.

The attention of obstetricians was drawn to those cases unsuitable for the Sanger operation because of previous examinations and as well to reports from many clinics of fatal cases of rupture of the scar in subsequent pregnancies. Beck, Davis, Hirst and DeLee have been the leaders in America in developing a method that would be applicable to certain of those cases barred from the high incision, and as well avoid the danger of a thin scar by placing the scar in the portion of the uterus where healing could take place under the best circumstances.

DeLee's operation is the simplest and the one most popular at present. A median abdominal incision just above the pubis, a transverse incision in the peritoneum one inch below its firm attachment to the uterus, dissection upward of the uterine and downward of the bladder peritoneal folds, longitudinal incision in the lower uterine segment, delivery, repair of the uterus in two layers with separate suture of the fascia, overlapping the peritoneal flaps in suspect cases only, and closure without drainage.

DeLee warns that this is not a method to be used on frankly infected cases and to perform it in the face of known infection is to invite disaster. But the safety from rupture in future pregnancies and the extension of operative delivery to potentially infected cases justify the use of the method.

Garrison: History of Medicine, Phila., 1913.

Gragin: The Practice of Obstetrics, Phila., 1916.

DeLee: Am. J. Obs., & Gyn., 1925, X. 503.

CROSSNORE SCHOOL

May 15, 1926.

Dear Mr. Editor:

We are getting inquiries from over the state about our school and we hope you will

give us space in your columns to tell these interested persons something more about our work.

Question 1—"How do you pay the expenses of your school?"—A question from Indiana.

As a public school we receive our proportionate share of the money the State sets aside for public education.

The remainder of the academic, industrial and boarding expenses are paid by personal gifts, scholarships and the sale of old clothes. The personal gifts are not so numerous, but now and then we get some fine ones.

Last year Mr. B. N. Duke gave us \$5,000 and Mrs. J. Sprunt Hill of Durham gave us \$500 and we had several gifts of a hundred dollars and fifty dollars from persons interested in our work.

The scholarships are carried by individuals, societies and D. A. R. more or less interested in the individual boy or girl. These scholarships cost \$50 a year and the money is used to pay for extra teachers and equipment that could not be given by the State if we did not pay our part of the expense. These scholarships improve our school and the children enjoy being "scholarship children" because it gives them a chance to write to the people who give them. The sale of old clothes is the most interesting of the three sources of income. We have five workers in this sale house, two to unpack the clothes and three who sell. If anyone ever tells you that Crossnore does not need clothes he is misinformed. Crossnore always needs clothes. We need them every day and somehow the more you send the more we need. Someone wrote us recently that they heard we were swamp under. This cannot be.

We need those clothes that are hanging in your closet a little worn. We need that old suit your husband wears when he especially wants to worry you. Send them to us and if he wants to come up for them, come with him and see the school.

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boys and girls to take a college education? Where do they get the money?"

When the children come here we give them room and board for \$2.00 a week and they have to work for the school to get the money to pay for it. We give them work to do and encourage them to do it. (No, they are not any better to work than your children. It is a hard job to make them work). We also encourage them to look forward to a college education. When they finish High School nearly all of them want to go on and they are not afraid to go to college and work their way through. They do not fear work. Most of them go to college.

We also have a loan fund, because you know it takes money to go to college. We insure their lives and they then borrow the money from us.

We wish from time to time that you would write and ask us questions. We would like to answer them and we want your interest.

Remember it is your clothes that support Crossnore. You are the power behind the throne. Don't forget to send them.

Crossnore is in the most beautiful part of the North Carolina mountains and when you are touring, don't forget to come by. We make hand-woven goods and you will be interested to see them. You have not completed your tour of the State if you have not seen its industries, and this is one of the most interesting.

Cordially yours,

Mary Martin Sloop, M.D.

NEWS ITEMS.

DR. A. J. CROWELL, of Charlotte, was recently awarded the honorary degree of doctor of science by Davidson College, as a recognition of the advances he has made in his field of work.

DR. HENRY M. THOMAS, JR., has established offices for the practice of internal medicine at 1014 Saint Paul street, Baltimore, Md.

DR. H. C. SHIRLEY, of Charlotte, addressed the Greenville County (S. C.) Medical Society on June 7, as a part of the policy of this society to invite men of outstanding ability to speak to them from time to time.

DR. W. B. LYLES wishes to announce to the profession that after July 1st he will have associated with him DR. ROY P. FINNEY. Practice limited to urology and urological surgery, Spartanburg, S. C.

DR. R. W. PETRIE and Miss Annie Gertrude Rhyne, both of Charlotte, were married in New York City on June 1. After July 1 they will be at home in Lenoir.

DR. JOHN HILL TUCKER has just returned from two weeks of study of glaucoma under Dr. E. J. Curran, of Kansas City, Missouri.

REVIEW OF RECENT BOOKS

A TEXT-BOOK OF UROLOGY, by Oswald Swinney Lowsley, A.B., M.D., F.A.C.S., Director of the Department of Urology (James Brady Foundation) of New York Hospital; Consulting Urologist to the Hospital for the Ruptured and Crippled, the New York Skin and Cancer Hospital, Peekskill Hospital, Monmouth Memorial Hospital, Spring Lake Hospital, Nassau County Hospital, and King's Hospital; Fellow of the New York Academy of Medicine; Fellow of the American Medical Association, American Urological Association and the Johns Hopkins Medical Association of New York City, and

Thomas Joseph Kirwin, Ph.C., B.S., M.A., M.D., Chief of Clinic of the Department of Urology, James Buchanan Brady Foundation of the New York Hospital; Adjutant Visiting Urologist, New York Hospital; Assistant in Urology, Cornell University Medical College; Assistant in Anatomy, Columbia University Medical College; Fellow of the American Medical Association, American Urological Association and Fellow of the New York Academy of Medicine. Illustrated with 233 engravings and 13 plates. \$10.00. Lea & Febiger, Philadelphia and New York, 1926.

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A text-book based on eighteen years of intensive study amid the most favorable surroundings can not fail to be valuable.

The historical review of urologic surgery will prove of great interest. It begins with ancient India and comes down to our own time.

The several organs are considered seriatim and the many diseases to which each is subject are discussed at length.

The book is attractively and forcefully written, is amply illustrated and has an excellent index; altogether, a very unusual volume.

PARENTHOOD and the NEWER PSYCHOLOGY, being the Application of Old Principles in a New Guise to the Problems of Parents with Their Children, by Frank Howard Richardson, A.B., M.D. Author of "Simplifying Motherhood," "Malnutrition and the Child," etc. G. P. Putnam's Sons, New York, London, The Knickerbocker Press, 1926. \$1.75.

The author studies his children from the viewpoint, insofar as maybe, of a child. He fears that "misunderstanding and lack of comprehension are far commoner between children and their parents than are sympathy and accord." He attempts to substitute everyday words for the many wild and whirling ones so dear to the heart of writers on psychology.

Some marked differences between the governing influences of the child and the adult are pointed out, as explanations of misunderstanding.

The chapter on "disciplining the child" has a very "psychologic" sound. Many of us see all about us those who, as children, were "disciplined" in a crude way by simple parents, and somehow have become very respectable and useful citizens.

For mothers who wish to address their clubs on "the last word," books written in a popular style and treating of psychology are ever welcome.

We do not believe, though, that psychology is a matter of newness and oldness.

EMERGENCY SURGERY, The Military Surgery of the World War Adapted to Civil Life by George De Tarnowsky, M.D., F.A.C.S., D.S.M., Colonel M.C., O.R.C. (378th Medical Regt., Professor of Clinical Surgery, Loyola

University Medical School; Attending Surgeon, Ravenswood Hospital, Chicago; Attending Surgeon, Cook County Hospital 1913-1919; Author of Medical War Manual No. 7, Military Surgery of the Zone of the Advance. Illustrated with 324 Engravings. \$7.50. Lea & Febiger, Philadelphia and New York, 1926.

An emergency usually enlists our best efforts toward meeting its demands. The very word fittingly suggests what it really is, an occasion for *dipping out* one who is literally or figuratively in danger of drowning.

It is said that an independent surgeon, practicing in a town in which there is a world-famous clinic, established his present large practice by reason of his always being ready, with grips packed, to deal with any emergency.

This work informs on means of handling patients in need of prompt surgical care, and besides, treats of general principles which one would associate with books appearing under more pretentious names.

Its teaching is well reasoned and plainly stated, and keeps in mind at all times the welfare of the patient.

Most doctors can recall at least one occasion on which a life has been lost because of unpreparedness for dealing with the emergency. Studying books of this sort and keeping a case packed with the right sort of remedies and instruments will help toward the prevention of such tragedies.

THE INTERNATIONAL MEDICAL ANNUAL—A Year Book of Treatment and Practitioner's Index. Forty-fourth year, 1926. New York, William Wood and Company.

Its name taken with that of its publishers, is an earnest of good things to be found on further investigation. Under the present stress of publication, no man can hope to keep in relationship to the advances made in medicine. If only those papers written for instruction, and because there was a real need for them, saw the printer's page, we would be far happier.

As it is we must depend on some one to sift, strain and classify. Many of those who write voluminously subscribe to agencies which, for a stipend, review the literature on any given subject and send in a summary. Obviously this is not within the reach of the

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majority of us, and it is entirely possible that some such work as the International Medical Annual would better serve the purpose.

From "abdominal surgery" to "yellow fever" it gives the present knowledge of disease conditions, with special emphasis on the advances which have been made in the past twelve months.

MATERIA MEDICA AND THERAPEUTICS

Including Pharmacy and Pharmacology, by Reynold Webb Wilcox, M.A., M.D., LL.D., D.C.L., Professor of Medicine (Retired, at the New York Post-Graduate Medical School and Hospital; Consulting Physician to St. Marks, to the Nassau, to the Ossining, to the New Jersey State, and to the Eastern Long Island Hospitals; formerly President of the American College of Physicians, of the American Congress on Internal Medicine, of the American Therapeutic Society, of the Medical Association of the Greater City of New York, and of the Society of Medical Jurisprudence; Honorary Member of the Connecticut State Medical Society; Fellow of the American Association for the Advancement of Science; Member of the Association of Military Surgeons. Eleventh Edition, revised in accordance with the U. S. Pharmacopoeia, X, with Index of Symptoms and Diseases. \$5.00, Philadelphia, P. Blakiston's Sons & Co., 1012 Walnut Street.

A book on drugs which gives the action and indications in a definite form is always in order. When such a book comes to its eleventh edition one need not question its practical usefulness. Its arrangement is unusually attractive and makes for readableness. Possibly there is too much of involuntary subversiveness to authority. It is difficult (even impossible) for some to read the testimonials in favor of new drugs and remain true to the old, which have no one present to advocate their claims.

AN INTRODUCTION TO SURGERY, by

Rutherford Morison, M.D., F.R.C.S., Eng., M.A., D.C.L., LL.D., Emeritus Professor of Surgery, Durham University; and Charles F. M. Saint, C.B.E., M.D., F.R.C.S., Eng., Professor of Surgery, Cape Town University, South Africa. Second Edition. \$4.50. New York: William Wood & Co. 1925.

Some of our surgeons need no introduction to their art; some will not accept an introduction, and some would not be acknowl-

edged; but there are many who have ventured into this field with inadequate preparation, or have suffered their knowledge of their early training to grow dim, and who will welcome an opportunity to rekindle their lamps at this shrine.

A man may be an *operator* and a *realtor* at the same time; but, in order to be a *surgeon* he must work at the job of surgery.

Such vital subjects as shock, wounds, hemorrhage, infection, suppuration, ulcers, gangrene, syphilis, malignant disease, natural cures and indications for operation are considered from a rather novel viewpoint.

Mistakes in diagnosis are discussed courageously, as those of a man who regards them as natural, and who wishes others as well as himself to profit by them.

DIATHERMY with Special Reference to

Pneumonia, by Harry Eaton Stewart, M.D., formerly Attending Specialist in Physiotherapy, U. S. Marine Hospitals, N. Y.; Consultant in Physiotherapy, U. S. V. B. Hospital, New Haven, Conn.; Directors, New Haven School of Physiotherapy; Formerly Assistant Director, Section of Physiotherapy, Office of the Surgeon General, U. S. Army, and Supervisor of Physiotherapy, Bureau of U. S. Public Health Service, Washington. With forty-five illustrations and fifteen charts. Second Edition, revised. \$3.00. Paul B. Hoeber, Inc., New York, 1926.

So much is coming from the presses on diathermy, the product is of so varied character, and the reported results of its exhibition so conflicting that we are glad to have a book from the pen of one so experienced and of such a reputation for balance as Dr. Stewart.

One would need no gift of prophecy to be able to predict that any method of treatment requiring so impressive a display of *material* could not fail to powerfully stimulate the exaggeration areas of the brains of many patients and some doctors. Overenthusiastic *devotees* have ruined many a worthy cause; and there seems to be danger of this happening in the case of diathermy.

So long as swelling pride does not carry the author beyond the assertion made in the opening sentence, "Diathermy is one of the most valuable single agents in our entire therapeutic armamentarium," we can go along with him.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA

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The longest chapter treats of technique, and "surgical diathermy" has a short one. Of one hundred and fifty-nine patients reported as having pneumonia and treated by diathermy, 23 died, a mortality of about 15 percent; while of 21 patients used as controls, 9 died, a mortality of 39 per cent.

If these results can be shown to be constant in a larger series and with about an equal number of controls, entirely unselected, the medical world will joyfully acclaim a wonderful aid in the battle against one of the most serious of diseases.

MANUAL OF EMERGENCIES. Medical, Surgical and Obstetric, Their Pathology, Diagnosis and Treatment (Based upon Lenzmann's "Emergencies in Medical Practice"), by J. Snowman, M.D., M.R.C.P., Lond. Second Edition, \$4.00. New York, William Wood & Co., 1926.

A certain medical teacher used to tell his students that a doctor should know how to deal with emergencies immediately, and know where and how to look up the information requisite for dealing with other cases.

This volume includes instructions for managing some conditions, as asthma and meningitis, which can only be called emergencies by making an elastic use of the term. However, such inclusions add to its value.

The very fact of treating of a symptom, a disease or an accident as an emergency, will cause an author to make his description of methods direct, definite and concise, doing away with "may do this" and "may try that."

It is a valuable book for giving instruction in the kind of knowledge which must be used at once in order to be of value.

THE THYROID GLAND. The Beaumont Foundation Lectures Series No. 4, by Charles H. Mayo, M.D., Professor of Surgery, University of Minnesota, Mayo Foundation, Rochester, Minn., and Henry W. Plummer, M.D., Professor of Medicine, University of Minnesota, Mayo Foundation, Rochester, Minn. Auspices of Wayne County Medical Society, Detroit, Mich., 1925. Published April, 1926, by The C. V. Mosby Company, St. Louis. \$1.75.

In this booklet is embraced the essentials

of our present knowledge of the thyroid, its functions and its diseases. So much has been written, so much incorrectly copied, so many opinions expressed on insufficient grounds; in short medical literature has been so burdened and cluttered with worthless or misleading stuff about goiter that we must welcome a summarization of the items of importance which may be accepted as authentic. And it is not as long as some of the windier essays we have heard.

A MANUAL OF NORMAL PHYSICAL SIGNS, by Wyndham B. Blanton, B.A., M.A., M.D., Richmond, Virginia, Associate in Medicine, Medical College of Virginia. St. Louis, The C. V. Mosby Company, 1926. \$1.75.

The author undertakes to clarify the muddle of normal and abnormal signs for the beginner. Plating the areas of the body surface and listing the organs found thereunder is a feature of value for quick reference.

It may well be questioned whether sound is more important than light in physical diagnosis: undoubtedly it is of tremendous importance and the doctor should know more about it.

The outline will serve a good purpose in encouraging systematic examinations and records.

NURSERY GUIDE for Mothers and Children's Nurses, by Louis W. Sauer, Ph.D., M.D., Senior Attending Pediatrician, Evanston Hospital; formerly Attending Physician, Chicago Infant Welfare, and Assistant Attending Physician, Children's Memorial Hospital, Chicago. Second Edition. St. Louis, The C. V. Mosby Company, 1926. \$2.00.

The scope is wide, from calculating the probable onset of labor to an appendix listing a foot of books on care of the child.

The book is written in a cheerful, happy, light style which will keep up the interest of the nurse or mother. Supplemented by the advice of a competent doctor, and having its general statements subordinated to his rulings, such books serve a useful purpose in the hands of mothers with good reasoning powers.

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Vol. LXXXVIII

CHARLOTTE, N. C., JULY, 1926

No. 7

THE BALANCED MIND IN MEDICINE

by

WM. DEB. MAC NIDER, M.D., Chapel Hill

Presidential Address to the Medical Society of the State of North Carolina,
June, 1926

Mr. Chairman, Members of the Medical Profession of the State of North Carolina, Ladies and Gentlemen:

It is customary for the president of the Society in addressing the organization to express his appreciation for the honor that has been bestowed upon him for the year which has just passed. It appears to me that such an expression of appreciation gains weight by simply assuming the honor of the office and the duties which it imposes. I heartily desire to express to the profession my deep appreciation of the opportunity which this office has given me of knowing in a better and a more intimate fashion the medical men and women throughout the State. During the past year I have visited all of the districts of the society at the time of their meetings. In some districts I have had the pleasure of more than one visitation. This has carried me from beyond Asheville in the West, to Elizabeth City in the East. In addition, the physicians of various county societies have been kind enough to ask me to meet with them so that I have attended over twenty-eight county societies and other medical organizations.

In these visits I have been struck particularly by three things. First, the fine leadership as citizens which our physicians hold in their communities. Second, the sincere and deep interest which physicians show in medical thought and discussion, especially in experimental medicine and deductions which may be made from laboratory experiments. Third, during these visits and with the

friendly, intimate association which has been accorded me by physicians in their homes and on their daily rounds in visiting the sick, I am yet to hear one single unkind word or a single harsh criticism by one physician of another. These observations have made me love my brothers in the art of medicine more deeply, and have served as a certain spiritual exaltation of the profession as a whole.

I have had great trouble deciding upon a subject for this address; not for the reason of any lack of subjects or any dullness in these subjects, but on account of my sincere feeling that I was incompetent to address such a group with the wisdom and foresight of the men who have gone before me in this position. In running over the addresses of past presidents, in some way the address of dear Doctor Tom Anderson appealed to me immensely. It was so full of fine thought and sweetness; it contained such humor and seasoned wisdom that I should like to have done something like it. I finally realized that on this occasion, as on all others, whether it be for the better or for the worse that a man should try to be himself. So I have cast aside the guidance which can be found in former addresses of this character, and this morning I want to talk in a simple fashion to a thoughtful and understanding group. As I go along I "may shoot an arrow o'er the house and injure a brother; if I do I am sorry and I ask his pardon." What I have to say is, I feel, for the betterment of medicine in the State, and my highest hope is that there is enough of suggestiveness in this address to provoke thought and honest discussion.

At the outset, I should be lacking in understanding if I did not express my appreciation to Dr. L. B. McBrayer, secretary of this society, for his help and thoughtfulness during the past year. He has gathered much information for me concerning situations in the State and the activities of other medical societies so that I might see by comparison what we are doing and what we should do and he has helped me to understand the policy and background of our organization as it has developed through its years of service.

An organization such as the Medical Society of the State of North Carolina, like an organism, like an individual, is not a static thing; it can not remain stable. It must like an individual grow and develop and make new adjustments on the inside and on the outside of its life to an ever changing medical, social and economic environment. It can not stand still and serve its purpose. "It must not be the first the old to cast aside, nor yet the last the new to try." If it fails to realize this factor of adjustment which the life within it and on the outside of it demands, if it fails to meet changing conditions, it will find itself unable to live a happy and useful life in its sphere of action which must always have in it a certain element of sane progress and freshness.

With such thoughts in mind, these questions naturally arise; first, what is the function of such an organization; is it growing and adjusting itself in such a fashion to enable it to meet its obligations, and finally based on thought, not on emotion, what can be done to better it?

The function of an organization such as this State Medical Society perhaps needs no analysis, for it has lived and is living a useful life, but if we open the windows and permit an air of inquiry to rush in it will at least cleanse and freshen things. Certainly its first function is to encourage the spirit which has dominated the minds and held the hearts of true medical men through all of the past years. This spirit, as I see it, is primarily one of self forgetfulness and thoughtfulness for others. It breeds a certain sweetness and light which has likely found expression in its highest form in a member of the profession who has recently died, Dr. John Whitehead, of Salisbury. His mentality was acute. He saw sick individuals, and he saw

disease not in terms of an isolated disturbance in this or that organ, but he saw it comprehensively in terms of the individual as a whole. He knew through his knowledge of drugs their power and healing value. Through his knowledge of surgery he realized its value when other agencies in medicine were either not indicated or had failed, and he knew above all that the prime function of a physician is to employ any and all sane measures which will enable an individual once more to adjust itself to a living environment. His healing power was mighty and his reputation as a physician will last as long as medical men exist in this State. He knew as a fact which so few of the younger medical men do know, or have time to appreciate, that an individual is more than a mechanism; he knew that with all of the science of medicine, there is an art of medicine which is of great importance and in part finds expression in the life and personality of the individual physician; and this life and personality of his which was of God he gave to sick people abundantly.

Next to such a spiritual conception of the function of a medical society, its essential duty is to have meetings for one prime purpose; to present medical and surgical thoughts in the form of scientific papers which are of such a nature as to provoke discussion. Nothing should occur at any medical meeting which will interfere with this first consideration. For over twenty-one years I have attended every type and class of medical society meeting and I am yet to attend one which was not helpful and which did not teach me something. The essence of medicine is study. I do not mean superficial study, but study of the fundamentals in medicine. The incidentals will come and be forgotten but the basic things we must dig for and hold to. In this connection, we should think of that master mind in medicine, Sir William Osler, who during his professorship at the University of Pennsylvania, when patients clamored for his services, when every social opportunity was before him for his enjoyment, turned his back on money and on ephemeral pleasure and spent his week-ends at the old Blockley Hospital performing autopsies from morning until night and far into the night, studying the relationship of these findings in the dead house with what

had happened on the clinical charts in order that he might the better understand disease. His information became tremendous, his practice later in Baltimore became of such a volume that the general feeling is he had to leave in order to have a chance to teach and think. The practice of medicine and the acquisition of medical truth meant work and study to him and he laid hold on it.

A third function of a medical society is to bring medical men together where they can clasp hands and rub shoulders so they may better appreciate the fineness and forget the superficial smallness common to all human beings. You will recall in this connection the story told by President Wilson in his Guild Hall address in London. John Stewart Mill is supposed to have remarked to a friend relative to another person: "I hate that man," and his friend said, "Why, John, you don't even know him." His reply was, "That's true, if I knew him, I couldn't hate him." The social side of a medical gathering is of great value, but it has no right to dominate the purpose of such a gathering and this purpose should be one of study and thought and discussion.

Fourth, a State Medical Society should furnish the background through which Public Health measures and the State Board of Health can operate. There should be no divorce between these organizations. They are dependent, one upon the other. Public Health measures and policies when contrasted with medical development are recent adventures in the life of the State. When we think of such measures, we naturally become reminiscent and go backward to the days of Dr. Thomas F. Wood, Dr. George G. Thomas and in terms of the present to Dr. Richard H. Lewis. It is of interest just now to see the labors and ideals of these men, strengthened and made broad in scope through the recognition of such agencies as the International Health Board and the Duke Foundation. When one from among us was chosen to guide one of these agencies our State Board of Health received splendid recognition.

I wonder if we have an adequate understanding of what Public Health is. The name conveys an idea which is easily tangible; it conveys an idea of preventing disease and preserving health, but do we realize what

must come behind all of this in terms of training if public health work is to be sound in its character and enduring? Later on I hope to return to this subject.

A fifth function of a medical society is to guide legislation on medical subjects, not in terms of political maneuver and the use of the lobby, but by giving information and facts to legislators in such a form that they can be understood and be of value to such groups in formulating laws relative to the practice of medicine. In this connection I understand that our State Board of Medical Examiners represent a group that is legally invested with the power to regulate the practice of medicine in this State. Such a power is given in this country to only a few Boards of Medical Examiners. It shows the faith that the State has in us, and it therefore behooves us to be certain of the group of men we select to perform this important task. I feel that some one man on such a board should have a certain continuity in terms of his office which will enable a new board to appreciate from the start the policy and principle on which past boards have operated in such a successful fashion.

Sixth, it is my feeling that this State Medical Organization with its years of active service which has given it stability and sound judgment should have the guiding hand in all questions of medical welfare in the State. There is in the profession an ever increasing number of highly trained and specifically trained men in all of the branches of medical science. These men should direct the medical activities in welfare organizations. It is one thing to want to be helpful; it is quite another thing to have accurate information sufficient to know how to be helpful. With this thought in mind, I feel that the various welfare organizations should keep in close touch with organized medicine in the State in order that such organizations can obtain specific information and know how and where it is best to act. Our interest in the welfare for the tuberculous, for crippled children, for the feeble minded should head up in those men selected by the State on account of their ability to guide such thought.

MEDICAL EDUCATION

In making some statement concerning medical education in the State, I must ask

your permission to speak simply as an individual who on account of having had the opportunity of teaching medical students for twenty-six years has the question foremost in his heart. I feel that such an experience enables me at least to think on this subject which takes its place right at the foundation of what any medical man is to become.

During the past eighteen months, two outstanding contributions have been made to medical education and to the care of the sick in the State through the great wisdom and fine feeling of Mr. James B. Duke. His first idea which came to the public notice of strengthening and creating hospitals in South Carolina and North Carolina in order that sick people could be more adequately cared for, warmed the hearts of the people in these States as few things have ever done. They had placed before them with adequate backing a great humanistic ideal. Following this, the wisdom of some group expressed itself in definite form by giving to Dr. W. S. Rankin the responsible task with all of its difficulties and high hopes of putting this scheme into operation. A wiser choice could not possibly have been made.

There are throughout these States hospitals which have been in existence for years, that have rendered the finest type of service, very likely charity service to a marked degree. Such institutions if they need it, and desire it should be given first aid in order to go forward with a type of work they have amply demonstrated they are competent to perform. The creation of new hospitals depends upon many factors which are familiar to students of the subject and which are not familiar to me. A hospital like a teaching institution is a mechanical contrivance in which the brains and spirits of individuals can operate. A new hospital without the proper mental equipment on the inside might prove a menace rather than a help. It is with these two thoughts concerning the old hospitals and the new, that I rejoice that a man of wisdom and thoughtfulness could be obtained to put in operation an ideal which certainly the South has never had and perhaps never dreamed of.

Following close on this first announcement concerning the development of hospital facilities, came the news of the establishment of a medical school as an integral part of Duke University, a school to be amply en-

dowed to train men and women in this section of the South to become the highest type of physicians. My knowledge of this development rests solely on statements by the daily press which I assume are true and accurate. Likely nothing has ever happened to the profession in the State and in the South which is of greater moment and which stimulates our imagination more than this benefaction. It carries with it tremendous responsibilities which I feel the profession in the State realizes and furthermore believes will be so handled as to insure the fulfillment of our medical ideal.

There are all too few medical schools which have had the opportunity to commence their lives in a fresh untrammelled field, free from all entangling embarrassments. It is like going into a virgin forest with an abundance of time for thought and with understanding decide where to build a home and protect it for all time to come. With such a medical school centrally located at Durham, adequately endowed and built into the intellectual fabric of a great educational institution whose ideals have been established there are certain questions of state interest and of interest to this society which should be faced. It is a very rare thing for an individual to become sick in just one location and for other parts of the organism not to participate in the disease. Such diseased conditions which may become generalized are often at first of a very specific character and their proper handling requires not only the judgment of one physician specifically trained in a certain phase of medicine but of a group of such specifically trained men in the various branches of medicine. Consultations are necessary for the understanding of the illness. Very often such studies require hours or days. Research methods have to be employed to handle this case and prepare the way for others. For the above reasons, individuals even though at first specifically sick with one definite disturbance should be so grouped; they should not be isolated, that they can command the attention of medical and surgical specialists in a wide variety of fields. If we are to have at Duke University a medical unit of outstanding eminence we should consider the wisdom of grouping around this institution the hospital for the tuberculous, the orthopedic hospital and the

institution for the feeble-minded. These institutions are young; they have not had time enough to acquire such sentimental considerations and physical development based on expenditure by the State as to prevent them from commencing to live in a new location centralized around a learned institution whose life we reckon by centuries. The points in favor of such a reorganization are perfectly apparent from the standpoint of medical education and from the point of view of the institutions under consideration. We must see such things in the long view and not become excited over a temporary interference of decentralized development.

Before leaving the subject of medical education I want to say something about Public Health Education. The old fashioned Public Health Officer was a pleasant person elected by some county or municipal board and from the nature of his training in medicine, and his absolute lack of training in public health his duties were necessarily superficial. The method by which such officers are elected, their type of training and the service they render has improved. But it is still far from what it should be. Public Health education as we see it in our officials is not on the same plane of medical education as we see it in physicians, and yet the science of public health has developed even more rapidly than the science of medicine. This work should be done by men who have at least some specific training in their specialty. I feel the public health official in counties and cities should first be a physician. Through his training and contact with people he is in a better position to understand them and with his tact and diplomacy to put into operation the necessary measures which concern themselves with public health. In addition to this, I feel he should have some definite training in public health which he can not obtain from the overloaded curriculum of the medical school. I can not well imagine how the medical schools in this and in other States could be of more use to the State, than to give sound, though more or less elementary courses in the theoretical and practical branches of public health administration. The laboratories of the medical schools are the same as the public health official would require in his training. Courses in Biology should be given to provide him with the

proper understanding of the life history of those animal parasites so often the cause of disease in man. Courses in Hygiene could be amplified to suit his needs. Courses in bacteriology, milk and water analysis would be offered to give him first hand information. If a physician going into public health work could have as a minimum a year of this type of training, followed by a year of training in the office of the secretary of the State Board of Health, the State Laboratory of Hygiene, with intervals of experience in field work, we should obtain a more understanding type of health official than we can secure at the present time. Furthermore, with this taste of what the science of public health really is, there would certainly be an increasing number of such men who would desire to perfect themselves in this science by some years of study at institutions that have a School of Public Health. I hope very much our society and the State Board of Health will give this thought the consideration I feel it deserves.

CONCERNING A MEDICAL JOURNAL OWNED AND OPERATED BY THE STATE MEDICAL SOCIETY

The question of a medical journal of this character is an old one. The North Carolina Medical Journal was founded in 1856, and since this date, journals of different types have in part given expression to the medical thought of the State. Various committees have been appointed by the State Society to consider the question of operating a journal as its official organ. In some instances these committees have had to operate under certain handicaps. They have not had the privilege without any restriction of considering first the principle, as to whether or not it is best for medicine in the State to have a journal and furthermore, whether or not a journal could be financed without restricting other activities of the society. In one instance a committee which made such an investigation was specifically instructed according to the reading of the motion which created it, to consider the establishment of a journal in lieu of the transactions of the State Society. In another case a committee was appointed to consider the advisability of the society taking over Southern Medicine and Surgery as a State Society owned and operated journal. I have no hesitancy whatever in express-

ing my opinion of this journal. It is splendidly edited, most of the papers which appear in it are of the very first quality, the advertisements it runs are, so far as I can see, of an ethical nature, the editorials under various department heads are splendid and it carries the current medical news of the State. Under the editorship of Dr. J. M. Northington, this journal has established itself as one of the best medical journals of a local character. Whether or not this journal should be taken over by the State Society is a question which I have no right even to attempt to answer. A committee, splendid in character, has been appointed to consider this specific question and report back to the House of Delegates. You will of course hear their report and act on it as your judgment best directs.

In my relationship with county, district societies and the State Society for twenty-three years, I feel there are many things which a medical journal of the best type and properly edited could do for the profession in the State. The papers in many of these organizations are well worth publication, aside from appearing in the Transactions. If such notice were taken of this medical thought, it would stimulate more and better thought.

Such a journal, in an issue to appear every two months, might feature the medical activities in the various districts of the State and confine itself very largely to papers presented in the district. In this way it would keep in close touch with such organizations and through them with the county organizations. Weak counties would be strengthened. The councillors of the various districts would have a medium through which they could be of real service in the district and in the counties.

If the journal should go to every member of our parent society it would bind together through its medical thought and news our membership and give to the society as a whole a certain solidarity which would be helpful.

The editorial offices of such a journal could serve as the source for a packet library system on medical, surgical and public health problems which would be available for physicians in the State to guide and broaden their medical thought and aid in the preparation

of papers for the various medical organizations.

A monthly medical journal of the type now in mind, would very soon exert its influence outside of the State and bring before physicians and organizations remote from us an understanding of our medical thinking and activities.

The establishment of such a journal necessitates certain definite considerations. In the first place, from the standpoint of expense, would it be wise to do away with the Transactions of the State Society and confine the record of our medical thought and the proceedings of the State Society to a medical journal? The Transactions of the Medical Society of our State represent in terms of continuity a history of what has happened medically in the State which is invaluable. There are likely few States in the Union which have so complete a record. My feeling on this question is very definite. Medical journals come and go; editors change, and this record of ours if given up might face the possibility of losing its continuity. I would be opposed under any condition to dispense with the Transactions.

The second question which naturally arises in thinking of a State owned journal is whether or not it is financially possible. This question can not be answered without approaching it in a business-like fashion and giving it detailed study. The society dues would have to be materially increased. State Society dues in other States, with one exception, whether they do or do not operate a medical journal, are much higher than our dues of \$3.00 a year. The annual dues in other States range from \$3.00 to \$20.00 a year.

There was a time when we could truthfully look upon the physician as poor; he will always be underpaid so long as he serves his profession and humanity. At the present time conditions have changed, and I doubt if we can say in truth, that there are many poor physicians; physicians who could not stand, and be willing to stand for the good of the profession, a material increase in the annual dues. My knowledge of the society and the attitude of its members to such a question is not what it should be. If an increase in the dues would sacrifice to any appreciable extent our membership, it would be most

unfortunate. On the other hand if we could retain the Transactions and maintain a clean cut medical journal by an appropriate increase in the dues, we should strengthen State medicine.

A third question, and one of great importance, is how such a journal should be managed. Should it be conducted by the secretary of the society who would also act as editor, by a separate editor, or by an editorial board elected by the society with one of its members serving as editor-in-chief? These are questions of detail for an appropriate committee. The question in general is one I am sure many physicians in the State are interested in, and it would appear wise for a committee of some size first to study the principle of the question without hindrance and give to the society the benefit of this thought.

A WHOLE-TIME AND PERMANENT SECRETARY FOR THE STATE MEDICAL SOCIETY

By whole-time I mean a secretary who does nothing but handle the business of the society in all of its many ramifications. This should include the editorship of the journal if we decide to have one. By permanent I mean the tenure of office should be sufficiently long to enable the occupant of the post to demonstrate his ability or lack of ability, to make his contribution if he has one to make, and through it to give expression to his ideals. During the past year I have come to realize that the average physician has no idea whatever of the detail, the importance and the time consuming character of this position. The president of the society as we all know is purely an incidental and ephemeral position. The secretary with his knowledge of what has gone on in the past, of what is going on in the State and with his relations with secretaries of other State societies and the American Medical Association holds our organization together. In order for the secretary to be effective for the State Society in these and other broader relationships he should have more time for his work and a longer tenure of office. We should look forward to the time, in the very near future, when this officer is placed on a whole-time basis.

CONCERNING A CONTINUITY OF SERVICE FOR THE SECRETARY OF THE STATE BOARD OF MEDICAL EXAMINERS

Medical licensure and the many duties imposed in connection with the regulation of the practice of medicine has expanded along with other activities of the State and of our society. The secretary of the State Board of Medical Examiners, in order to handle this position in an effective manner, must know the history of medical licensure and the laws relative to it not only in this State but in other States. Our board has delegated to it by legislative act the power to enforce the laws governing the practice of medicine. Such authority needs background and guidance which comes through a continuity of secretarial service in order to direct it. At the present time, to a greater extent than in the past, it has become the custom of physicians to migrate from one State to another and make application before boards of examiners for license. Such changes necessitate first hand information on the part of the secretary of conditions in other States in order that a board can act in an understanding fashion.

A secretary to a board establishes relationships with such officers in other States and understands the operations of such groups and through this understanding our board tunes in and cooperates with other boards. The office of secretary constitutes much more than mechanically recording those applicants who have been granted license and those that have been rejected.

It appears important that the office of secretary to a board of examiners should continue and furnish the new boards elected every six years certain detailed information which they need in order to function in a fair and understanding fashion. With this thought in mind the suggestion is made that the Board of Medical Examiners in this State be increased to a body of eight men, that one of the eight elected every six years should be looked upon in the capacity of a permanent secretary and the remaining seven men serve actively in the capacity of medical examiners. It should be understood that the re-election of such a secretary is to take place every six years, unless there should develop in such an interim definite reasons for his recall,

THE HARRISON NARCOTIC ACT

On account of conditions which have arisen in the State concerning the Harrison Narcotic Act, it would appear natural for some statement to be made concerning it. The good points of the act are too obvious to mention. It has prevented the indiscriminate sale of narcotics and has exerted a restraining influence on the use of these drugs by physicians. On the other hand, in certain particulars it is drastic, and embarrassing to physicians who desire to use such drugs as therapeutic agents. There are in this State and migrating into it several hundred addicts to the use of drugs embraced by the act. The question at once arises, what must physicians do to handle this group of mentally and physically sick individuals. With my imperfect knowledge of the law as it now operates, there are only two ways by which a physician can treat a person addicted to the use of such substances. If the addict is poor and can not afford a private institution, he can either be handled as an ambulatory case, by reducing the amount of the drugs, or he can be committed to one of our institutions for the insane for treatment. The first solution of the problem is beset with well nigh insuperable difficulties. Such patients at once pass on the information to others of their kind so that a physician handling such a group is likely to gain a reputation far from enviable. In cases such as this the treatment may extend to something more than treatment, and the physician, either premeditatedly or accidentally finds himself in a position which demands action such as our present Board of Medical Examiners has had to take during the past year. Their action was definite and just and had the backing of every thoughtful physician.

If such a type of poor patient, or even a patient in moderate circumstances, can not be properly cared for as an ambulatory case, he has only one other recourse, commitment to an asylum. Such a course is not fair. The suggestion is made, that if the Federal authorities desire such a law to be carried out in letter and in spirit and permitted to operate in a humane fashion, they have in every State their own institutions for the care of such cases or in part subsidize one or more existing sanatoria in each State for such a purpose.

At the present time, according to the Journal of the American Medical Association (Volume 86, No. 19, p. 1473, May 8, 1926) there is a bill now before Congress which concerns itself with strengthening the Harrison Narcotic Act of December 17, 1914. The purpose of this bill is to clear up certain points which have been raised in certain courts to the disadvantage of the government. As I understand it from this journal, every prescription issued by a physician will be subject to review by any pharmacist who may be called on to fill it. If there are present "circumstances from which the dealer might reasonably deduce that the prescription was not issued by the physician, dentist or veterinary surgeon in the course of his professional practice only," the pharmacist can not lawfully fill it. There is at once apparent the power this gives to the pharmacist, to a certain extent we assume, over the good and honest judgment of a physician. The pending bill provides that every physician shall keep a record of all narcotic drugs he dispenses or distributes, no matter how small the amount may be, except in emergency cases. Furthermore, "a physician can not, if the impending bill is enacted, dispense or distribute narcotic drugs pursuant to the so-called ambulatory treatment of narcotic drug addiction." There are other features of the bill which will make it difficult for physicians to abide by it. My feeling is that the society should appoint a committee to study both the original law and the impending drastic revision and express the feeling of this State Society to the Federal authorities concerning it.

In the discussion I have given of various questions concerning our welfare it has been with no feeling of the possibility of reaching their solution. If in such considerations, there is enough thought to demand the attention of the society, I trust suitable committees will be appointed to take these various suggestions under advisement.

THE BALANCED MIND IN MEDICINE

In conclusion, I want to say a few words on the balanced mind in medicine. All living things appear to be concerned with a certain element of balance. There is a balance in the seasons which influences the processes of life and gives to them a period for activity

and a period for rest. There is a balance within the higher organisms without which they are rendered unable to maintain an inward and an outward stable relationship with their environment and function in a normal manner. Body temperature, osmotic pressure, and the relation which exists between acids and bases in an organism are examples of such important balanced states. Nature makes adjustments and effects balances as life goes along, and when nature fails to do this, disease prevails.

Finally, when we reach the extreme in terms of being unbalanced death results. We like to speak of individuals as being well balanced. Men such as Clarence A. Shore and James K. Hall are balanced; they can be depended upon and tied to. The mind of man in general fails to work in this balanced fashion. It appears to demand excursions into the extremes of experience in order to orient and balance its thoughts and activities. Certainly, in medical thought we have had opportunities to observe such extremes; and as we study such deviations we note that if time be given us we come back to a normal balanced state where we can function effectively.

Not so many years ago there were no preliminary requirements of an academic character for the study of medicine. A young man read *Anatomy* in some physician's office; he traveled with him on his visits, and after a year or more he went to some so-called medical center and took a course of lectures in medicine extending over six months to a year. He came back home as an apprentice, and such an apprenticeship was splendid. I wish we had it now. After a year or more he began to practice medicine.

The other extreme which we are now approaching is quite different. Before long, a young man or woman in order to study medicine must be a high school graduate from an accredited school; they must have four years of academic training of the highest and most specialized character, particularly in the scientific branches and with all too little attention to cultural subjects which make for a general understanding and happiness. Following this comes the four years of the medical curriculum in which attention to many abstractions of theoretical value and to the intricacies of chemistry dominate the mind

of the student, and finally one to five years of a hospital internship where refinements in diagnosis and a hunger for autopsies with all too little attention to treatment completes his training. This is the other extreme in medical education. It may temporarily restrict the number of physicians in rural communities and lead to over specialization, but in general it is good and breeds a fine type of medical man. It may have gone too far in another direction; but if we give it time, it will balance itself and be better.

The relationship of the physician to patients has changed. There was a time when the practitioner of medicine was depended upon to do everything of a medical and surgical character, and very frequently he did it in a thoughtful and splendid fashion. As the years went on medical research gave us more information until it was impossible for any one man to do everything. The amount of information concerning disease became so great that no one man could master it and use it. As a result of such development we have now reached another extreme—when a certain number of people with a superficial insight of things medical have gained the idea that no illness can be handled except in terms of specialization and a host of specialists.

From such changed conditions in medical knowledge and medical training we occasionally hear statements which tend to minimize the value of the general practitioner. This is a poorly thought out point of view. Is there anything wrong with the general practitioner? Not much, there can't be. People at the present time have a tremendous amount of information about medical questions, and they want physicians of a certain clean, studious type, with fine understanding. The demands made upon the general practitioner often keep him from study and from visiting medical clinics which keep him fresh and interested. If the physician will make this adjustment to the changed order in medicine, his position will be stronger than in the past when it rested to a certain extent, not only on information but a certain exacting authority. I can not possibly imagine real medical thought and effective medical organization without the dominating influence of the general practitioner, the family physician. If anything in medicine should ever develop

to mar the influence of such men in it as Robert L. Felts, James W. McGee, and Joshug Tayloe, the spirit and art of medicine will have ceased to exist and all we will have left will be a husk which will rattle and shake itself to death in every materialistic wind that blows.

In thinking of such changes in medicine, of the general practitioner representing one extreme and a sane one, and the highly trained specialist representing the other; sometimes so highly trained that he has been trained out of the domain of medicine, I believe here again with the help of time an adjustment will be made.

The balanced mind in medicine, the trained and thoughtful mind in any type of endeavor, does not become excited or unbalanced at such changes in experience as we have discussed. It sees such things in the long view

and knows that with the help of time an adjustment will be reached in human relationships, just as this same factor has operated to balance the seasons, and to balance and regulate the chemical changes in life. If we look upon these changes in medicine with such a mind, it gives us faith that extremes are transitory and that a normal adjustment will in time take place.

And what do I mean by faith? What do you mean by faith? This balanced mind in medical men is founded on faith; a faith that will enable it to live through the happiness of the triumph over disease, that will enable it to survive in the failure of a hoped-for success, and which makes it know the necessity of holding fast to a Something which is in it all, through it all and over it all—God.



ACUTE INTUSSUSCEPTION IN INFANTS*

Based on Twenty-five Operated Cases

JAMES W. GIBBON, M.D., Charlotte

SITE

The ileo-cecal region is the common site for the beginning of an intussusception. The great majority early or ultimately involve the colon. A few cases occur in which the intussusception is limited to the small intestine. There has been only one in our series in which this was so.

ETIOLOGY

What is the cause of acute intussusception? Although many theories, some plausible enough, have been suggested, the real cause in infants remains unknown. In adults and older children intestinal tumors and diverticula acting as foreign bodies set up sufficient irritation of the bowel wall to produce the condition of intussusception. But in infants such conditions are rarely the cause. Perrin and Lindsay suggest the possibility that swollen, enlarged and inflamed lymphoid tissue in the wall of the intestine acts as an irritating foreign body and gives rise to intussusception. Another suggestion as to causation is the presence of a preternaturally long mesentery in young infants which allows the intestine an unusual amount of freedom of movement. Perverted peristalsis set up by an insufficient or incoordinated muscle control may be a factor in the etiology. Gastro-intestinal inflammation is said by some authors to be a predisposing element. Injudicious feeding, too active purgation, etc., are considered by some as important factors. Moorhead believes that an "ileo-cecal tenesmus" is produced whenever there is an ileo-cecal catarrh, and that the repeated forcible peristalsis of an irritable intestine driving down on a firmly closed ileo-cecal valve causes intussusception. Once the invagination has started the contact of the swollen, congested apex stimulates the walls of the intestine and tends to make the intussusception increase indefinitely. He draws an interesting analogy between intussusceptions

and prolapse of the rectum in infants, the latter being due to an anal tenesmus, a tight sphincter, and forcible peristalsis driving down on this from above. The cause and effect in the two cases are therefore similar, only in different areas of the intestinal tract.

MORTALITY

Acute intussusception is the most frequent surgical disease of the abdomen in infants. It is perhaps very much more frequent than is generally believed. During the past five year period Dr. R. L. Gibbon and I have operated on twenty-five cases, and seen an additional number in consultation in whom the diagnosis of intussusception was not justified. Among these twenty-five cases, there were four deaths, a mortality rate of 16 per cent. This compares with a mortality rate of 30 per cent in a series of fifty cases reported by Bolling, 20 per cent in a series of two hundred and seventy cases by Clubbe; and 8 per cent in fifty-one operations by Hipsley. This last figure is the lowest on record, and is quite a remarkable one. Generally the mortality rate in operated cases averages between 25 and 40 per cent. Perhaps 95 per cent of this mortality rate is due to the condition of patient at the operation. Of the four patients in our series who died; one had gangrene of the intestine requiring resection; another was a case of intussusception which complicated a case of ileo-colitis—the baby having been ill three weeks with this when he developed intussusception, naturally his chances were poor; the third was an infant who had been ill several days and was moribund at the time of the operation; and the fourth was in a similar condition after three days of disease.

SURGICAL EMERGENCY

From these figures it is at once evident we are dealing with a dangerous and fatal disease in young infants. Cases of this disease always present the gravest emergency. The diagnosis or recognition in the early stage is paramount. The life of the infant irrevocably

*Read by Invitation before the Robeson County Medical Society, November, 1925.

depends upon an exact and decisive diagnosis by the physician. The diagnosis having been made, surgical intervention should quickly follow. Delay in the diagnosis is exceedingly costly; failure to institute surgery is fatal. The condition of intussusception is a surgical disease. True there was a time, when the introduction of oil and other agents into the rectum in order to relieve the condition was considered satisfactory treatment, and in some quarters this is still the practice. At best such measures are uncertain, unreliable, and squander valuable time. Clear thinking, quick and decisive action must be the characteristics of the physician and surgeon handling infants suspected of having acute intussusception.

PATHOLOGIC ANATOMY

As to the age, intussusception is the most common surgical disease of the abdomen in infants under one year, and should be therefore kept constantly in mind.

In the matter of sex, the infants most commonly affected are, curiously enough, males, in the ratio of two males to one female.

The pathology is practically entirely one of circulatory changes in the intussusceptum. These changes are dependent upon the obstruction to the circulation by the constriction at the neck of the intussusception. The degree therefore of the constriction at the neck bears a direct relationship to the degree of pathologic change in the bowel wall, and in our experience this degree of constriction varies in different cases. But in all cases as the condition progresses the constriction at the neck of the intussusception becomes tighter and tighter. The venous, and lymphatic return flow from the entering loop, or intussusceptum, are first to feel the obstruction. The result is that back pressure develops in the veins and lymphatic vessels of the bowel wall. These vessels become enlarged, engorged and distended; serum soon begins to escape from the vessels and infiltrates the bowel coats which become swollen and edematous. With a continuation of the back pressure produced by the obstructed outflow, small capillaries in the walls of the bowel rupture and blood insinuates itself through the swollen bowel wall, causing the color to appear bluish, or black, and the wall becomes ecymotic. From the mucous

membrane blood and serum seep into the bowel lumen along which it passes, being ultimately discharged by rectum. Finally as the case advances,, increasing at the expense of the large bowel, the apex may pass down to the rectum, and even emerge from the anus; all the while the circulation suffering greater obstruction, until the arterial blood supply is cut off and gangrene quickly ensues.

Such is the pathology in a typical case, to which, however, there are exceptions,, chiefly in the rate of development, the degree of constriction at the neck, and the extent of the circulatory changes in the wall of the bowel. In some cases the intussusception grows rapidly, there are tremendous changes in the wall of the bowel and gangrene quickly ensues. In others, the development is slower, the swelling and ecchymosis less intense, the constriction at the neck lax, and the whole picture less overwhelming and precipitous. Where the intussusception grows slowly, adhesions may be formed between the various bowel coats. Or again, with the development of adhesions at the neck, the intussusception may slough off and be discharged in part or in whole from the rectum,—nature's method of curing the malady. I have never seen either one of these conditions.

Absolute intestinal obstruction at first is not common. Gas is usually passed even during the late stages, and a normal bowel movement may occur after the onset of the symptoms. Inability to obtain a normal bowel evacuation is the rule in spite of the administration of strenuous purgatives. It is generally believed, however, that the symptoms are much more dependent upon the interference with the circulation of the bowel than upon the obstruction of the canal.

Acute intussusception may develop during the course of an attack of common ileo-colitis. We had one such case in our series, as already mentioned. The recognition of the change in this infant during the course of ileo-colitis produced by the appearance on the scene of intussusception is only one of the many examples of the remarkable ability of Dr. I. W. Faison. In the hands of most of us I am sure that this baby would have died without our ever having suspected that a radical change had taken place in the intestinal tract of the infant.

SYMPTOMS AND PHYSICAL SIGNS

The onset of acute intussusception is abrupt, and usually without warning. The baby is usually in good health, and has not in our experience suffered any premonitory gastro-intestinal symptoms. The first symptom is usually a colicky abdominal pain indicated by the sudden screaming or crying of the baby and a tendency to draw himself together. He becomes pale, and immediately vomits. These symptoms are of brief duration and after a few minutes, except for the persistence of the pallor, the baby seems normal. The interval of calm, however, does not endure, he soon suffers another short attack, with recurrences every little while, until the baby finally sinks into a stupor. The vomiting is continuous and the baby is unable to retain nourishment after onset of the symptoms. Sometime during the course, either spontaneously or after an enema, there is a passage consisting entirely of blood and mucus from the bowel. As the case progresses the pallor deepens, the temperature and pulse mount, and the baby seems to experience no more pain but sinks into a sort of restless, stuporous sleep. Such is the usual course of the disease.

Anyone of the cardinal symptoms—pain, vomiting, or the passage of blood and mucus by rectum, may be absent, particularly in the early stages. Absolute intestinal obstruction is rare, and the baby is able to pass gas by rectum even in the later stages, although a normal bowel movement is not possible. The pain may be mild, and indicated only by a grunting, twisting, restless baby.

On physical examination, the baby practically always is robust and healthy looking; more commonly a male; is pale and in the later stages listless or stupid. The temperature, pulse and respiration are usually elevated. The most important feature is the palpation of the abdominal tumor. This may be felt anywhere in the abdomen, is soft, elongated, and movable. Oftentimes it is best felt by combined recto-abdominal examination.

DIAGNOSIS

Here is one of the most essential factors in the disease. A great deal depends on the early recognition by the attending physician.

At the outset, there are a few general principles which are helpful in reaching an early diagnosis. First, all physicians seeing babies should keep the picture of this malady well in the forefront of their minds. If the condition is thought of, it can often be diagnosed. It is a mistake to believe that this is a rare disease, and will never occur in one's practice. One should be careful too about making a diagnosis of ileo-colitis, when there has been a discharge of blood and mucus from the bowel in a sick baby, until one has satisfied one's self an intussusception is not present. If there is doubt, the greatest amount of light can be thrown on the case by frequent examinations at intervals of one or two hours. See the case often in the early stages. It is dangerous to leave a prescription and not see the baby for twenty-four hours. We have found that a case which at first may be uncertain or doubtful will after one or two hours be frank enough to settle the diagnosis. The change is often remarkable in just a few hours. One should go over the abdomen carefully each time the baby is seen, and search for the tumor, also insert the finger into the rectum and gently feel for it. If the tumor is felt the diagnosis is practically made. The tumor may not be felt until after two or three examinations. It may in an hour or more change its size, position and depth.

The burden of the responsibility rests upon the physician or pediatrician until the surgeon sees the case, and then the responsibility of diagnostician and surgeon are equal. The early diagnosis is equally as life saving as the operation. Too much credit cannot be given the man who first recognizes the condition. A successful diagnosis by the physician is as momentous, and should be as coveted as a successful operation. Of course the surgeon should be able to corroborate the physician and add his experience to that of the physician in deciding upon the merits of the case.

In making the diagnosis, one must depend chiefly upon the clinical picture, which as a rule is quite distinctive with the characteristic onset and symptoms, the palpation of the tumor is enough to settle the question. If there is still doubt, a barium enema and a fluoroscopic examination by a skilled roentgenologist may be of help. This will often show an obstruction somewhere in the colon,

but it is a difficult procedure in an infant who will quickly expel the barium, and is not practical unless the services of an efficient x-ray man are obtainable. In the majority of instances the diagnosis can be reached by a careful history of the onset and symptoms and careful, repeated examinations.

TREATMENT

Laparotomy and reduction of the intussusception is the ideal plan. In late cases, where swelling of the bowel walls is so great that reduction is not possible, or in cases of gangrene, resection must be done. Resection of course is frightfully hazardous in these little infants. We have been fortunate to succeed in a resection of half of the colon in a nine months infant who is well today. The operation, done under ether, must of necessity be at once rapid and gentle. Ripping or tearing of the swollen bowel wall during reduction is hard to prevent.

PROGNOSIS

In the preceding pages I have attempted to emphasize the tremendous importance of the diagnosis, and it is largely on this that the ultimate outcome of the case must depend. The high mortality rate is not more often the fault of the operation than the delay in reaching a diagnosis and the performance of the operation. I do not mean to say that a slow and bunglesome operation may not be disastrous—but I do say that fully one-half of the burden of the case rests on the physician's ability of diagnosis. An early diagnosis supported by a reliable operation, the united and intelligent efforts of physician and surgeon, are the factors which save lives and reduce mortality. So it is to be remembered that it is not always the operation so much as the time of the operation which determines the death rate.

Now in discussing the time of the operation and its relation to the death rate, it must be understood that the number of hours elapsing since the onset of the symptoms to the hour of operation does not represent a reliable criterion to judge which case should be considered an early and favorable one, or which a late and unfavorable one. Our cases have manifested the greatest difference of intensity when compared to the time element alone. What is an early diagnosis for one case may be late for another. Everything

depends more on the rapidity with which the symptoms develop. One case, because of constriction at the neck of the intussusception is not tight but lax, the circulation of the bowel being not greatly impaired, develops slowly. Two days after the onset such a case may be operated on, the swelling of the bowel found not to be great, reduction easily accomplished and the convalescence rapid and uneventful. One would naturally call this an early case. In another case the constriction at the neck of the intussusception is very tight, the circulation is at once greatly impaired, the bowel swells rapidly, and the arterial supply is quickly shut off, gangrene may occur in twelve hours after the onset of the symptoms, and, regardless of the skill of the surgeon, death is inevitable. Yet when compared to the first illustrative case, this latter one looked at from the time element alone should be considered an early case. But is it, when gangrene has occurred? The operation should have been done earlier. To make my point clearer, I can draw on analogy in irreducible hernias, which are familiar to all. Ordinarily considered an irreducible hernia is a surgical emergency—yet a hernia may remain irreducible for days without danger to the patient so long as swelling and constriction does not interfere with the blood supply or fecal current. But if the blood circulation is cut off, gangrene quickly develops, and the patient may be moribund or dead in a short period. Everything depends upon the obstruction to the circulation in intussusception and this is objectively witnessed by the rapidity and intensity with which the symptoms develop. A severe case will often overwhelm the patient at once, and that is why it is dangerous to leave for any great while after the onset of the symptoms before making a diagnosis, because in ten or twelve hours the disease may have developed to such a point as to preclude any hope to be gained from operating. So the mortality in fully 50 per cent of the fatal cases is due to the necessity of operating in the late stages of the disease—whether this be ten hours or three days after onset. The point is to watch suspected cases from the beginning, and to settle as soon as possible the question of intussusception.

POST-OPERATIVE TREATMENT

The questions of post-operative treatment, recurrence, and spontaneous reductions are all interesting but cannot be dealt with at length. The post-operative care is very important. In many of the cases, this is a stormy period, marked by high fever, toxic symptoms, and manifestations of nervous excitation. The great indication is to get in water. If the vomiting stops water can be administered by mouth; if not, it may be given beneath the skin in large amounts. In favorable cases a normal bowel movement often occurs within a few hours after the operation, and after a few days colonic irrigations may be helpful. Sedatives and antipyretics are usually of value. The baby is usually well at the end of a week if he is going to recover. To show the heights to which the temperature may ascend, we had one case which registered 109 by rectum for several hours before he died; another 107 who recovered. A high post-operative temperature is a bad omen, even though the bowels have moved.

RECURRENCE

Recurrence following the operation after intervals of several months are unusual but do occur. The symptoms are exactly the

same as at the first development. We have had one recurrence, after an interval of three months. He is well today, and soon will be beyond the twelve months age period when he will be pretty well out of danger from a recurrence.

SPONTANEOUS REDUCTION

Spontaneous reductions are reported in the literature, but the possibility is very remote and infrequent. In these cases after suffering the usual symptoms, the baby suddenly takes a turn for the better, and recovers,, and it is surmised that the bowel has spontaneously unfolded itself.

An Irish surgeon reported a case in British literature, in which he operated with assurance of the diagnosis, having felt a mass, etc. On opening the abdomen he found not an intussusception but a bowel swollen, ecchymotic and all the evidences of a recent intussusception. We saw in consultation a case in which we did not operate,, because the symptoms suddenly vanished, and in which we believed that a spontaneous reduction had taken place.

819 *Professional Bldg.*,
Charlotte, N. C.



THE UTILITY OF NON-SURGICAL BILIARY DRAINAGE IN CHRONIC INFECTIOUS ARTHRITIS

GEORGE M. NILES, M.D., Atlanta

The focal infections and their far-reaching potentialities for bodily evil and bodily distress have claimed much attention for a number of years. In many instances, the beneficial results following removal of diseased tonsils, diseased teeth, the comparative cleaning-up of the accessory sinuses and mastoids have been truly spectacular. Such happy incidents are matters of common history, and have occurred in the practice of nearly all physicians.

In this article, the writer wishes to call attention to the malign influence of a pathologic gall-bladder as bearing upon some cases of chronic infectious arthritis, and to report some instances where non-surgical drainage has seemed to greatly augment other remedial measures in the management of these distressing conditions.

That the gall-bladder may become infected, either from distant focuses in the body or through the blood stream, or that this small viscus may harbour various and sundry pathogenic bacteria, is admitted by all. Some of these "chronic gall-bladders" have long since passed the acute stage, and give but few local manifestations. The writer has seen numerous cases of chronic arthritis where the teeth and tonsils have been removed, where the gastrointestinal tract had been intelligently cared for, and still the trouble hung on. "Hope deferred, maketh the heart sick," and many of these sufferers become both weary and impatient. If, therefore, there may be used an additional and helpful therapeutic measure, especially one that entails no danger, it would seem desirable that such a measure should be invoked.

Let it be understood that the writer does not advocate the omission of any of the recognized methods heretofore employed, nor that any of the measures heretofore found to be beneficial should be left off. The logical reason for non-surgically draining the gall-bladder lies in the fact that there is abated,

to at least a comparative degree, a fruitful source of toxemia.

In some instances, quite a number of these drainages, at intervals of from three days to a week or more, may be indicated. Generally, the patient, after a few drainages, notes enough mitigation of the lameness and distress to evince a desire that the treatment be kept up.

The writer has had under his observation about thirty of such cases. Five of these had previous surgical drainages of the gall-bladder and one had the gall-bladder removed. In those cases, where the treatment could be prolonged sufficiently, there has been a definite improvement. In six of the cases, only two or three drainages were taken, and no improvement ensued or was expected.

The writer will report several cases, in which non-surgical biliary drainage has seemed to definitely benefit chronic infectious arthritis of one or more joints.

Mrs. C. W. M., aged 50, quite stout, a sufferer from habitual constipation, with a history of malaria, complained of a lameness in right ankle and right knee of varying intensity. Most of the time she used a cane when walking. Her teeth had been removed, her gall-bladder surgically drained three years previously, and she had constantly taken cathartics. Her gall-bladder was non-surgically drained sixteen times, at intervals of from three days to a week. After the fourth drainage, there was a noticeable improvement. This improvement continued, and when she left for another state, she was comfortable, her soreness and lameness having practically disappeared. Her husband, a physician, learned the technic of this procedure, and promised to continue it at intervals of from a week to ten days. At the expiration of four months, advices from this lady indicate a continued improvement.

Mrs. A. B. D., aged 44, suffering from chronic arthritis of both ankles and the right knee, was referred by her physician, from a

town about 60 miles out. She was on crutches, and was constantly taking cinchophen for pain. Her teeth and tonsils had been removed; also her gall-bladder, several years previously. Her gall-tract was non-surgically drained eight times in two weeks, after which she returned home, able to walk without her crutches, though not entirely free from lameness. Her family physician has kept up the drainages for about a year and a half. He writes me that she has but little trouble with her joints at present, has gained about 25 pounds, and, with the exception of some stiffness of the joints, is in a fairly normal condition.

D. C. C., aged 40, a merchant from a neighboring town, suffered from pain and lameness in his right wrist and elbow. His teeth and tonsils had been removed, he had had "electrical treatment," osteopathic treatment and chiropractic "adjustment." His appendix was removed about ten years ago. He was constipated, suffered with gas and indigestion, and was much discouraged over his continued disability.

He had twelve non-surgical drainages, at

intervals of a week or ten days, at the end of which time his pain had diminished, his joints were more flexible, his mental attitude more optimistic. His family physician was taught the technic of this procedure, and it has been kept up for about eight months. He can now use his right arm fairly well.

In addition to the drainages, the writer has given 5-grain tablets of plain emprin at one or two hour intervals, when needed for pain. Local application of methyl salicylate ointment (Mulford) has been recommended. The bowels have been kept open by a combination of bile salts and phenolphthalein, while the usual hygienic measures were recommended.

It is not necessary to prolong these reports; suffice it to say, that in every instance where proper cooperation was accorded, beneficial results have followed.

The writer submits this brief paper, believing it to be a real contribution toward the betterment of these chronic and distressing states, a method which entails no danger, moderate expense, and a minimum of effort and lost time to all concerned.

ACIDOSIS AS A CAUSE OF ACUTE ABDOMINAL PAIN*

DOUGLAS P. MURPHY, M.D., Rutherfordton

With what seems to be increasing frequency, we are noticing an intimate relationship between acidosis and acute abdominal pain. This observation has been made chiefly upon children, in whom a previous diagnosis of acute appendicitis has been made. Besides the classical signs of the latter, heavy acetone reaction in the urine and a heavy chloroform-like odor upon the breath have been present. In all instances, treatment of the acidosis has produced rapid and complete recovery from abdominal symptoms. This observation has led us to suspect acidosis as a cause of abdominal discomfort and pain.

Current literature makes little mention of acidosis as a cause of pain. McGuire states

that in acidosis there is often abdominal distress and gastric tenderness such as to suggest appendicitis. Riesman in discussing the extra-abdominal causes of acute abdominal pain, states his belief that there is some relationship between the two. He reports an instance of acute right sided abdominal pain in a diabetic from whom insulin had been suddenly withdrawn. Immediate administration of the remedy brought about a prompt cure, with disappearance of all symptoms of appendicitis. Marriott, on the other hand, in a personal communication says "Acidosis rarely, if ever, causes abdominal symptoms, either vomiting or pain." He believes that the abdominal symptoms are always due to some other underlying cause. It has been the experience of our colleagues in general practice, that abdominal pain is frequently

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

associated with acidosis in children, no other cause being found.

A typical instance of this association occurred in a ten-year old girl, whose illness had been diagnosed as acute appendicitis. When seen by us, she had been suffering with abdominal pain as a chief symptom for four days which had been gradually becoming worse. Her temperature was 100 and her pulse 104. The lungs were clear. The abdomen was slightly distended and somewhat tender, especially on the right side. The white blood count was 25,000 and the urine was negative except for a heavy acetone reaction. The breath also had a marked acetone odor. Operation was postponed and treatment was directed toward correcting the acidosis. Forty-eight hours later all signs and symptoms of acidosis and abdominal distress had completely disappeared.

It cannot be denied that this patient did not have appendicitis and the same may be said of our other patients presenting similar symptoms. If appendicitis was not present, some other abnormality of function of the

gastro-intestinal tract may have been the cause. The speed, however, with which these patients have responded and the completeness of their relief when treated for their acidosis, leads us to believe that this may be an important factor in the causation of the abdominal symptoms.

With these observations at hand, we feel that in examining all patients with acute abdominal distress, and especially children, it is very important to determine the presence and degree of acidosis; that treatment directed towards improving the acidosis may obviate an unnecessary operative procedure. It further leads us to suspect, although we do not have absolute proof that acidosis is a cause of acute abdominal pain.

BIBLIOGRAPHY

McGuire, S.: The surgical treatment of recurring Attacks of Acidosis in Children. *Trans. South. Surg. Assoc.*, 1923. xxxvi. 377-383.

Morriett, McKim: Personal Communication to the Author.

Riesman, D.: Extra-abdominal Conditions simulating acute abdominal Diseases. *Jour. A.M.A.* 1925. lxxix. p. 1973-1975.



SENSITIZATION DISEASES: AN EVALUATION OF THE RESULTS OF SPECIFIC TREATMENT*

WARREN T. VAUGHAN, M.D., Richmond

The conception that bronchial asthma, hayfever, urticaria, some cases of eczema and migraine, vasomotor rhinitis, and certain less clearly defined conditions are associated with protein sensitization is generally enough understood so that we may dispense with theoretical details. Bronchial asthma, urticaria and hayfever are probably the most characteristic of the clinical allergies and correspond more nearly to our experimental knowledge of anaphylaxis.

The anti-allergic treatment of these conditions has given results far superior to any previously obtained, yet we cannot say that cases were not cured by other methods before the introduction of sensitization therapy, or indeed *since* its introduction. Asthma has been relieved by intranasal treatment or operation, by the relief of gastro-intestinal pathology, or by the cure of a coexistent bronchitis. Urticaria has been cured with endocrin therapy, by removal of infectious foci, or by merely relieving constipation. Hayfever has probably been the most resistant to nonspecific methods; but even this has sometimes apparently been relieved by the treatment of a sinusitis or other upper respiratory tract infection, or by the removal of nasal obstruction. This is particularly true of the hayfever appearing out of season, the so-called vasomotor rhinitis.

Indeed, all of the diseases mentioned show at times a natural tendency toward recovery without any special treatment whatsoever.

We must infer that while protein sensitization is perhaps the most important factor in the causation of these diseases, it is probably not the only factor. This being the case it behooves us to search out all other factors which bear on the situation.

In 1923 the writer called attention to certain of these additional factors, which on theoretical grounds might conceivably influence treatment. He detailed certain experimental evidence tending to support his contention. The present communication consists

of a clinical follow-up study of a series of treated allergies with the hope of evaluating the importance of these nonspecific factors in practical experience.

For this study I have had available approximately 350 cases of allergy. From these, however, I have deleted the following groups, and for the following reasons. The etiology of hayfever is more clearly defined than that of the other conditions and is less influenced by accessory factors. Hayfever is therefore not included in this survey. Vasomotor rhinitis, hayfever occurring out of season, on the other hand *is* so influenced and has been included. Headache is at best but a symptom. It depends upon a great variety of causes. Even true migraine undoubtedly has a varied etiology. We might have included the so-called true migraines, a number of whom we have been able to relieve by avoidance of contact with allergenic proteins; but on the other hand I have occasionally had as good results in nondescript headaches, not typically migrainous in character. Therefore because of our imperfect understanding of this symptom, I have omitted my group of headache cases, hoping nevertheless that the conclusions reached in this study will be equally of service in improving our methods of treating allergic headache.

Eczema undoubtedly has a varied etiology, but since, as I have pointed out in an earlier communication, I believe that the majority of true eczemas are associated with sensitization, and since my results have been quite comparable with the results in asthma, I have included eczema in this series.

Pruritus ani, which is often a form of perianal eczema, is given a separate classification, for two reasons. First, the location and general characteristics of this form of local eczema are comparable in all individuals as contrasted with general eczema which may affect any part of the body; and second, almost without exception, my pruritus ani cases have been studied and treated in conjunction with a proctologist, Dr. E. H. Terrell, and consist of a series in which other local pathology, such as hemorrhoids, fistula and fis-

*Read at the meeting of the Tri State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

sure, have been conclusively ruled out.

Asthma has been included and in the tabulation no attempt has been made to rule out the so-called "asthmatic bronchitis," a condition symptomatically resembling asthma, but mechanically dependent on local pathology rather than on a general sensitization. This is done because as a rule diagnosis of asthmatic bronchitis is made by elimination, following negative results to sensitization tests, or unsatisfactory results following specific therapy. Sensitization tests have been done on the cases of asthmatic bronchitis with the result that in this series they will fall chiefly in the list of poor results.

Urticaria has also been included in the study.

Follow-up letters were sent to all patients with asthma, urticaria, vasomotor rhinitis, eczema and pruritus ani. The present report deals only with those in which information was obtained as to end results. The degree of relief following treatment is the patient's evaluation and not the clinician's. Under the conditions outlined we have available for statistical study 132 cases which have been followed for periods varying from three months to five years. The majority have been followed for at least one year.

In 1924 we wrote as follows: "The more we learn from our study of these various clinical conditions as allergic phenomena, the greater has been the number of cases we have been able to relieve or completely cure by specific therapy; but at the same time the more closely have we been forced to a conclusion that allergy and allergic disease cannot be explained in its entirety purely on a basis of protein sensitization."

We have stated our attitude toward clinical allergy briefly as follows: Protein sensitization is a constitutional, often hereditary diathesis or tendency. While contact with the causative protein often produces disease, an individual on the other hand may have contact and yet not experience clinical allergy. In this case he is in what we have termed "a balanced allergic state." He is sensitive but by some mechanism as yet unknown the body tissues are able to maintain their normal functioning. This balance may be overthrown by any of a number of additional factors. Focal infection or constipation may cause enough systemic intoxication to over-

throw the balance. Exhaustion or certain nervous influences may act likewise. Teething in an allergic infant will be accompanied by a rash. After the teething is completed the child still remains allergic but has return to a balanced state and the rash disappears.

While nonspecific factors may overthrow the balance, specific factors may act likewise.

An individual able to take care of the protein of egg to which he is sensitive, cannot take care of the protein of egg when in addition he is exposed to the protein of tomato, to which he is susceptible. Either one alone will not cause symptoms. Both together do. Or again, too heavy a dose of any one allergen may overthrow the balance.

Table I gives a brief summary of cases studied with the end results. "Cases benefited" includes those showing from 50 to 100 per cent improvement as indicated on Table IV.

TABLE I
ALLERGIC DISEASES STUDIED

Disease	No. Cases	No. Benefited	Percent Benefited
Asthma	48	32	68%
Eczema	28	15	54
Pruritus ani	22	9	41
Vasomotor rhinitis	15	11	73
Urticaria	22	16	73
Total	135		61.5

In Table II the type of reactions is indicated. A little over half had good reactions, the rest had questionable or borderline reactions. Some allergographers would have considered the last group negative and would not have tried specific treatment. The question at once arises whether it is worth while when the reactions to the skin tests are minimal, to go ahead with protein restrictions. The answer may be found in Tables III and IV. Table IV is but a condensation of Table III.

TABLE II

DISTRIBUTION OF CASES ACCORD-
ING TO CHARACTER OF ORIGINAL
SKIN TEST

Good Prompt Reaction	61 Cases	46%
Good Delayed Reaction	9	7
Borderline Reaction	62	47
<hr/>		
Total	132 Cases	100%

Furthermore, half of those with poor or borderline reactions were directly benefited. We must conclude that it is worth while to carry on treatment with these cases.

Table V brings us to the same conclusion. Of those unimproved, two-thirds had poor reactions. But one-third of those who were not improved had had good reactions. What prevented their getting good results? Assuredly, some factor other than sensitization, other factors.

TABLE III

PROGNOSTIC VALUE OF SKIN TESTS

Comparison of Original Skin Tests with Ultimate Results

Extent of Improvement	None (0%)	Slight (25%)	Distinct (50%)	Very Good (75%)	Complete Relief (100%)
Good Prompt Reaction (61 cases)	18%	15%	13%	36%	18%
Good Delayed Reactions (9 cases)	22%	11%	11%		56%
Borderline Reactions (62 cases)	37%	13%	16%	19%	15%
Total, 132 cases	27%	14%	14%	26%	19%

TABLE IV

PROGNOSTIC VALUE OF SKIN TESTS

(Continued)

Extent of Improvement	Unsatisfactory (0-25%)	Very Satisfactory (75-100%)	Direct Benefit (50-75-100%)
Good Prompt Reaction	33%	54%	67%
Good Delayed Reaction	33%	56%	67%
Borderline Reaction	50%	34%	50%
Total	41%	45%	59%

We find that patients with 75 to 100 per cent improvement are satisfied and do not seek further treatment. Those represented in the third column of Table III with 50 per cent improvement (and included in the last column of Table IV) showed definite improvement attributable to specific protein restrictions but not sufficient so that they do not seek relief by some other method.

From a study of Table IV we observe that two-thirds of the patients giving good sensitization reactions are directly benefited. But at the same time one-third of these are not benefited. This suggests that there must be

Neither the age at which treatment is undertaken nor the duration of the disease can be taken as a prognostic factor when considering the probability of getting good results from specific therapy. Perhaps slightly better results are obtained in children than in adults but so many other factors play a part, such as character of allergens, ability to avoid exposure, etc., that the age and duration factors are of secondary importance. (Tables VI and VII.)

TABLE V

DISTRIBUTION OF REACTIONS ACCORDING TO END RESULTS

No.		Prompt Reaction	Delayed Reaction	Good Reaction	Poor Reaction
36	Unimproved	31%	5%	36%	64%
54	Little benefit	37%	5.5%	47.5%	58.5%
59	Very satisfactory	56%	8%	64%	36%
25	Entire relief	44%	20%	64%	36%

TABLE VI

PROGNOSTIC SIGNIFICANCE OF AGE

Age	No. Cases	Bene-fited	%	Total %
Below 10	16	13	81	
10-20	12	8	66	
20-30	23	10		71
30-40	30	17		
40-50	32	17	54	
50-60	12	6		
60-70	5	4		
70-	2	2		

TABLE VII

DURATION OF ILLNESS

Time	No. Cases	No. Benefited	% Benefited
0-1 year	18	11	61
1-3	26	10	38
3-5	17	9	53
5-10	22	15	68
10-20	19	11	58
20-30	12	8	66
30-40	4	3	75
40-	1	1	100

TABLE VIII

HEMOCYTOLOGIC FACTORS

Leucocyte count	In cases benefited	Not benefited
Below 6000	16%	20%
6-10000	74%	65%
Above 10000	10%	15%
Eosinophilia	30%	35%
Lymphocytosis		
10-20%	1 case	2 cases
20-30	9	7
30-40	15	4
40-50	5	3
50-60	3	2

The presence or absence of a leucopenia, of a lymphocytosis or an eosinophilia is no criterion on which we can base our estimate as to the results of treatment. (Tables VIII and IX.)

Hypotension is a frequent concomitant of allergic disease. In our limited series hypotension as well as hypertension occurred in both those who were benefited and who were not. Similarly underweight and overweight occurred in both groups but the underweight individual was clearly more likely not to be benefited than the overweight. (Table X.)

TABLE IX

EOSINOPHILIA

Of those cases benefited 30% had eosinophilia
 " " " not " 35% " "

Of those cases (15) showing eosinophilia 60% were benefited
 " " " (32) without " 66% " "

TABLE X

BLOOD PRESSURE

	Below 110	110-145	Above 145
Among those benefited	20.5%	59%	20.5%
Not benefited	27%	65%	8%
All allergics	23%		

WEIGHT

	Underweight	Average-wt.	Overweight
Among benefited	11%	59%	30%
Not benefited	30%	54%	16%

Of 90 weighed patients (all weights)—59% were benefited.
 Of 17 underweight—35% " "
 Of 22 overweight—73% " "

Of 132 patients 54 were not appreciably improved or at most, but 25 per cent improved, by the avoidance of contact with allergenic proteins. Of these 54, 33 did experience added benefit following other methods of treatment. This illustrates our contention that allergy should be treated as a disease dependent upon both specific and nonspecific factors. Of the 33 not improved by specific avoidance and subsequently improved otherwise, 17 had given good skin test

(Record of 74 cases)

Positive family history in 64%	
Of those giving positive family history 57% were benefited	
Of those giving negative family history 63% were benefited	
Of those benefited 61% gave positive family history	
Of those not benefited 66% gave positive family history	

reactions while 16 had given poor reactions. The division is about equal. This indicates that it is as important to carry out other treatment in those who have given good clear-cut positive reactions as it is in those who have given poor reactions. Improvement was obtained by the application of the following methods in individual cases. Autogenous vaccine treatment, 8 cases. Subcutaneous injection with unheated peptone solution, 20 mgm. doses, 6 cases. Autosero-therapy, 1 case. These 15 cases, vaccine, peptone and serum therapy, may be grouped together as cases which have improved under treatment which is commonly described as nonspecific protein desensitization.

One asthma case improved on change of residence. Another appears to be dependent entirely upon the weather and climatic conditions. Two improved after removal of foci of infection. One of these was an asthmatic; the other had urticaria. Four eczema cases were relieved apparently permanently, by the application of local ointment. Ray therapy has given relief in two eczema cases where specific therapy was a failure. One pruritus ani case was subsequently relieved by an operation for hemorrhoids. One asthmatic was relieved with thyroid extract. She had had her asthma chiefly around the time of her periods. One eczema case which had not responded to dietary restrictions cleared up promptly on the avoidance of an irritant. She was an artist and her hands were in frequent contact with turpentine. This appears to have been the nonspecific irritating factor. One generalized eczema case clearly sensitive to certain proteins, finally cleared up by avoiding all animal proteins such as lamb,

beef, pork, although she was not sensitive on test to any of these.

On the other hand, 21 cases which did not respond to specific measures, likewise did not respond to other methods of treatment. Nine of these had given good skin reactions, 12 had given poor ones. The probability is that had we continued and used yet other methods of nonspecific treatment, the results would have been even better.

CONCLUSIONS

Allergy is a disease of multiple etiology both specific and nonspecific, which for best results requires treatment of all the interacting factors. Good results are sometimes obtained when the cutaneous reactions are poor. On the other hand, all cases giving good skin test reactions did not necessarily respond to treatment.

Age, duration of the disease, blood picture, weight, and blood pressure findings give us no prognostic information, good and bad results being obtained in all groups.

Results are perhaps a little better in those giving no family history of allergy but we should bear in mind that there may have been allergy in the family, of which the patient himself was not cognizant.

Some cases which did not respond to specific routine restriction did respond to nonspecific protein desensitization. This occurred both in good and poor reactors. Likewise some among both the good and poor reactors who were not improved otherwise, got good results from other methods of treatment as tonsillectomy, general dietary alterations, change of climate and the like.

707 Medical Arts Bldg.



THE FUNCTIONAL NERVOUS DISEASES WITH ESPECIAL REFERENCE TO CHOREA*

W. C. ASHWORTH, M.D., Greensboro

The subject of my paper is entirely too comprehensive, but I wish to call the attention of the members of the Tri-State Medical Society especially to one of the so-called functional nervous diseases, viz., chorea. I am mindful of the fact that, because of the research work especially by the younger members of our profession, the number of functional nervous diseases is gradually diminishing. I wish, however, to call your attention to the present status of our knowledge of the etiology, symptoms and treatment of chorea.

We are especially indebted to the student of endocrinology for the very advanced work in determining the manifold nervous disturbances which we find in the choreic patient. The more rational classification may here be between the developmental diseases of the nervous system, since they all depend upon faulty development either of the nervous system itself or of other structures and functions whose mal-development registers itself in nervous dysfunction. This class of nervous diseases exhibits such a wide variety and irregularity of clinical expression as to make it difficult to generalize about pathology and symptomatology. It must be admitted, however, that there is a familiar likeness running through the entire group of functional nervous diseases. Etiologically they all rest upon the underlying condition of biological instability, due to defects in the germ plasm and ramifying back into heredity and developmental stresses and strains. This instability manifests itself so far as the nervous system is concerned, in one or other of three general modes:

First: Organic; of which porencephaly, cystic brain, hydrocephalus, etc., are typical examples.

Second: Functional; of which chorea, epilepsy and neurasthenia are types.

Third: Psychic; of which hysteria is a mild instance and the psychoses and insanities, the more extreme forms.

These three modes of course overlap and merge into one another, and, as a consequence, the symptomatology varies in its detail all the way from slight muscular twitching to convulsions or paralysis, and from mild irritation or depression to mania or melancholia. Therefore, it is quite impossible to differentiate sharply the diseases of this class as we are able to do with the frankly organic diseases. All we can do is to recognize various phases of the state which underlies them, of which the different diseases are but clinical manifestations. The physical forms of course really constitute organic defects as truly as though they were acquired diseases, and their discussion properly belongs under a consideration of organic nervous diseases.

It is the functional forms only that concern me in the preparation of this paper, and the essential symptom-complex of all these is the same, viz., a constitutional neuro-mental inadequacy to the normal demands of living. In other words they have common stigmata exhibiting a wide range of severity and expression. These diseases being developmental in character are very prone to make themselves manifest for the first time during periods of developmental or physiological stress, such as dentition, adolescence, puberty, pregnancy and at the period of middle life. The later the period of life at which the disease manifests itself, other things being equal, the less hopeful is the prospect of a cure. The diagnosis is usually made upon the neuronc and mental manifestations, which dominate in each of the various diseases of the group. In frankly developed cases it is not, as a rule, difficult to make a diagnosis on these special symptoms. It is unfortunate, however, that we sometimes encounter borderland cases in which we can hardly say whether the condition is epilepsy, chorea or hysteria. The

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diagnosis is rendered more difficult of course during the early stages, especially before the special neuron symptoms have declared themselves; therefore, a differentiation is sometimes almost impossible. Fortunately, however, the differentiation between the members of the group is not of serious importance since the general management of the entire group is the same, whose detail can easily be adapted to the existing indications of the individual case. It is of more importance to differentiate between genuine developmental nervous diseases and certain traumatic or accidental conditions which may resemble them sufficiently to make confusion easy. Our reliance for differentiation must depend upon the general symptomatology. In distinguishing between true developmental nervous and incidental conditions, it must be borne in mind that the former consist in broad systemic mal-development of which the spasms or fits, or other special symptoms are simply features, and a careful survey of the patient must be made for the stigmata of the disease. If many, or all of these are present, the nervous disorder is probably a true developmental disease (chorea, epilepsy, etc.) if none of them is present, we should seek for an accidental explanation of the nervous symptoms. One of the most important considerations in this connection is the period of onset.

Frequently parents bring their children, or adults come themselves, complaining of nervous symptoms (spasms, fits, fainting spells, etc.) which they associate with some fall or other injury suffered a greater or less time prior to the appearance of the nervous trouble. An inquiry frequently shows that the appearance of the disorders coincided with one or other of the periods of physiological stress, and this fact in conjunction with the discovery of several of the typical stigmata, should make us strongly suspicious of the developmental character of the disease.

The controversy concerning the etiology of chorea which has been, and is still being, waged by the advocates of the developmental theory on the one hand, and the proponents of the infection theory on the other hand, is of academic interest rather than of clinical importance. The existing facts, which in most cases are plain enough, do not seem either to necessitate or to admit of being

woven into any ingenious *single* theory. To deny the influence of biological defectiveness is to ignore a set of conditions which stand out conspicuously before the eyes of every physician who has to deal with a case of chorea; therefore, to negate or deny the role of infection is equal to overlooking an obvious set of conditions, which, if they are not inherent or integral parts of chorea, at least enter into a clinical picture of *every* case. It must be admitted that either the biological or the infectious factors, or, for that matter, both of them may be present in a patient without constituting chorea. The defective conditions are the common type such as may or may not result in chorea. The infectious elements are of equal and common type, such as are found in numerous diseases other than chorea. Chorea is, therefore, probably, to be regarded not so much of a disease entity, made up of either or both of these groups of factors, developmental and infectious, as rather a nervous denouement precipitated by their joint effects.

The choreic child is, in nervous development, ahead of the game. He is precisely the antithesis of the epileptic in this respect. His neuro-mental system develops at the expense of his physical. He is precocious both mentally and neurally. His cerebro-spinal system is hyperesthetic, his metabolism is vitiated, his mentality is brilliant but shallow. He learns with rapidity but cannot keep up the pace. His irritable nerve centers keep his muscles in continual motion, but there are, as a rule, no toxic seizures. His reflexes are all exhausted. If not relieved, he becomes nervously exhausted.

On the other hand, his body is underdeveloped and inadequate, his circulatory and glandular systems, which are normally always under stress in the growing child, suffer great damage. The heart, well known to be small and barely sufficient for the needs of the body even in normal children, is weak and irritable. The tonsils, distinctively the defenses of the child, are not equal to their task. They become hypertrophied and degenerated, and as a consequence, invite a whole host of common bacteria, viz., streptococci, staphylococci, pneumococci, etc., so that we invariably find a routine history of a more or less regular train of infectious and post-infectious disorders (tonsillitis, rheumatism, endocard-

itis, etc.), all of which react upon the already distinctive mechanism of the body and thus close a vicious circuit.

DIAGNOSIS

The diagnosis of an established case of chorea is not very difficult, for, as above stated, chorea in its technical sense consists in the precipitation of certain nervous demonstrations, the well known muscular spasms. When these spasms are established, the only real question of diagnosis lies between true choreic movements and habit spasms, therefore, differentiation is really very simple. The physician has only to bear in mind that the movements of habit spasms are normal coordinated movements, being, in fact, imitations of actual movements, while those of chorea are inimitable and incoordinated such as no one could intentionally produce. It may be added that the movements of a choreic subside, as a rule, during sleep, when the child is at rest, while the imitation and habit spasms are, if anything, worse during repose.

Broadly speaking, however, the diagnosis of chorea involves a recognition of the general condition which forms the ground-bundle of the specific disease, and which makes every victim of such a condition a potential choreic; the mental precocity, the easily induced fatigue, the anemia, the extreme nervousness, the insomnia, the dyspepsia and anorexia, and finally signs of tonsillar infection, including rheumatism, arthritis, endocarditis, valvular lesions. These are the landmarks by which one may recognize the choreic, or, perhaps better to say the pre-choreic state, and by judicious care and treatment may often prevent the development of the disease. There are, of course, borderland cases in which a physician can hardly say whether the condition is one of epilepsy, chorea or hysteria, particularly in the early stages before the special phases have fully developed. Many such cases never do proceed to frank development, so that for a lack of a better differentiation we distinguish them as hysterio-epilepsy, epileptoid chorea, and similar compound terms. There is no doubt, however, that these types are really overlapped, confirming a view expressed above concerning their underlying biological identity. It is impossible, however, in this brief paper to go into the vexed question of the differential

interpretation of these borderland cases.

TREATMENT

Inasmuch as chorea is primarily biological in character, there can be no therapy that will reach the underlying state on which it rests. Happily, however, in all of such biological instability there is a tendency on the part of the organism to restore equilibrium, provided the task is not too hard. Chorea, therefore, often disappears or improves spasmodically at puberty, when the heart enlarges and all the organs of the body come into a fuller capacity. The aim of our therapy from the biological aspect of the disorder should be assistance in giving the body every possible chance. It is plain, therefore, that there are three basic principles involved in the treatment of chorea:

First: To remove all foci of nervous irritation and leakage, including foci of infection.

Second: To correct the vitiated metabolism and assist functional efficiency.

Third: To sedate the irritable nerve centers to the point of steadying, but not of intoxicating them, pending a restoration of their stability.

As to the first of these indications, while it is probable that focal infection and other focal irritations never actually cause chorea, they do frequently aggravate, and occasionally precipitate it. Of these sources of infection and irritation, the tonsils, the nasal sinuses, the eyes and the gastro-intestinal tract are the most frequent offenders; but any organ or function may be the culprit, or perhaps several of them conjointly. Consequently, a careful search should be made over the entire body, from head to foot, inside and out, for such foci of trouble, and wherever found they should be corrected or removed.

The attainment of the second object implies:

1. Regulation of the food intake.
2. Stimulation of metabolism.
3. The maintenance of free elimination.
4. The supplying of lacking nutritive elements.

The diet of the choreic patient should be just as generous as his digestive capacity will allow. This does not mean, however, the reckless and indiscriminate stuffing of the

patient with anything and everything which is vaguely assumed to be nutritious, but, on the contrary a careful selection of a suitable diet as indicated by urinalysis and other means of investigation, and by a painstaking supervision of the various metabolic indexes. Only what the child assimilates and uses is of any value to him; and moreover the food must be supplemented by other remedial measures to insure the patient benefiting by the diet.

Stimulation of the hepatic metabolism is an important part of this indication. This function is always faulty, the urea output is always low. Regulation of food will go a long way toward remedying the trouble; rigorous hygiene, fresh air, regular living and rest will do much more. In the way of drugs nothing is better than small doses of colchicum, given in association with one of the bitter drugs.

The blood-making function is best assisted by some form of arsenic. This drug, of course, has always been a sheet anchor in the treatment of chorea. It must be borne in mind that arsenic alone will never cure chorea, and most of the failures in the treatment of the disease result from a blind, fatuous faith in arsenic as the only drug to be considered. This drug is nowadays best given by intravenous injection.

Elimination, like hepatic activity, is generally obtained by attention to the diet and hygiene. Occasionally, however, it is well to clean out the intestinal tract with a few days' course with some harmless cathartic, followed by some saline laxative. The drinking of citrus fluids and the eating of citrus fruits and other cooked fruits encourages renal elimination.

Finally the system must be furnished, as far as possible, with the constructive elements which it lacks or in which it is deficient. Of these the most important are lecithin and nuclein. The former can be given by the mouth, the latter should be given hypodermically.

The task of sedation has been formerly assigned in the text books to the bromides. However, the bromides alone to be effective must be given in fairly large doses, and as these salts have a high chemical potential they are apt, in such doses and in continued administration such as we have in chorea, to

upset the body metabolism and debase the nerve centers. It is far preferable, therefore, that the bromides be combined with synergistic vegetable sedatives of low chemical potential so that the sedative effect may be obtained mildly and safely. A combination of bromides, skilfully blended with bitter tonics having a marked sedative and an antispasmodic action, in properly graded doses, can be given to the youngest person without untoward effects.

Of vast importance is the element of rest, both to the body and the mind. The child should be under firm, but gentle, control and made to lie down, whether he goes to sleep or not, for several hours each day. Rest is a *sine qua non* in the successful management of chorea. Judicious sedation as described above will, of course, help to promote physical and mental rest.

DISCUSSION

Dr. J. Allison Hodges, Richmond:

Leaving out entirely, for the moment, the pathogenesis of this disease which is under discussion now probably more than at any previous time in our medical history, but which has been under discussion for years, and because of the very fact that it is termed a functional disease, which, to my mind, simply means that this is a delicate and rather evasive way of explaining how ignorant we are, I wish simply to make this point—one of the very few Dr. Ashworth omitted. A country physician called it to my attention many years ago, and I have used it ever since. It is a therapeutic fact which is of undoubted value, and it is this—that in association with the long used method of arsenic medication, if we give iron at the same time, we will get increased efficiency in the treatment of our patients. In applying this suggestion and studying it, I find that iron in a digestible form is a quieting agent for the muscular tissues, in addition to its nourishing value, and I believe it is valuable in the chronic cases, especially, to combine the administration of iron, in as digestible form as possible, with your other medication and your other methods of treatment. I simply suggest this to the doctor, though probably he already knows it. If he has the opportunity in his hospital to give this treatment so that it will be accurately followed, I am sure he

will get benefit from it.

The average case of chorea is not properly treated by the average physician, because of fault in the physician himself in not properly dominating and managing that patient so as to get what is the *sine qua non* in treatment—rest. We simply tell the mother or nurse to give the patient so much rest a day. The doctor says give him two or three hours' rest a day. I should say, give him twenty-four hours' rest a day. We would get rid of the symptoms in major chorea if we would dominate that case by requiring the rest, which we at times, only politely suggest to the attendant to require. Demand it and get it, and you will certainly cut short many of the cases which you would not be able to manage otherwise.

As to the bromides, I long ago stopped giving them in a case of chorea. You can not expect to get any result except one which is attained either by increasing the dose or by keeping it up so long that it is injurious to the patient. I prefer to use other means of control, the water treatment, etc., which is of incalculable benefit to those who are prepared to carry it out, but is rather difficult of application. In these cases, if you remove all the causes of disease which may be present in the system, and keep the functions open by giving plenty of water, even if you do not use it as a bath, giving absolute rest, and keeping the patient on a restricted but nutritive diet, and give arsenic and iron, an exceedingly small number will go on to the violent stages of major chorea.

Dr. M. L. Townsend, State Board of Health, Raleigh:

I should certainly be derelict in my opportunity if I did not commend this paper. Excluding trauma, and excluding bad habits, really, down in your hearts, is there any acquired ill of mankind that you can prove is not directly traceable to malnutrition or toxemia? Chorea is certainly one of the functional diseases, and is called functional because nobody knows the exact cause. As

Dr. Ashworth says, it is a token of our ignorance. It is functional, and is a combination of two things; there is a toxemia, with disturbed structure, and there is malnourishment. The nerve cells do not receive the nourishment they need. The treatment by rest and nourishment proves that.

Along with the one symptom we call chorea, Dr. Ashworth has named a number of other things. Rheumatism, tonsillitis, endocarditis, are all inflammatory conditions in various parts of the body. Chorea is certainly one of the functional conditions which do need removal of the irritating cause and do need rest and nourishment.

Dr. James K. Hall, Westbrook Sanatorium, Richmond:

I believe Dr. Hodges intimated that our medical use of the word functional is a euphemism. Weisenberg of Philadelphia told me a few years ago that chorea is an organic disease of the brain. We used to think of paralysis as a functional disease—perhaps some of us do still. There has been so much pseudo-agitans following influenza and sleeping sickness that our conception of the underlying cause of paralysis agitans, of course, has been obliged to undergo a change. Freeman, a young man who works with Dr. White in St. Elizabeth's Hospital, in the pathological department (by the way, he is a grandson of Dr. W. W. Keen), told me within the last year, that he had autopsied at least four cases of paralysis agitans in that hospital, and that he had found, without exception, some degenerative changes in the base of the brain, in the substantia nigra, I believe. He is of the opinion that paralysis agitans is a real, genuine organic disease, and I should not be surprised if we find out that there is some sort of kinship in the anatomical geography and perhaps in the etiological factor in such conditions as lethargic encephalitis (sleeping sickness), chorea, and paralysis agitans. Dr. Weisenberg told me two or three years ago, Dr. Ashworth, that he felt certain that chorea is a genuine organic disease of the brain.



SOME REMINDERS ON DIGESTION*

MATT O. BURKE, M.D., Richmond

The digestive system is embryologically connected with the entire body; with the epiblast at the inlet and outlet; with the hypoblast throughout its epithelial lining; and formatively derived from the mesoblast.

Through its nerve supply it is also intimately associated with the derivatives of the three primitive membranes. Considering its embryological relationship and its nerve supply we can better understand the manifestations in the digestive tract of disease in other parts of the body; and since the digestive system furnishes nourishment for the entire body we can readily comprehend why symptoms manifested in distant parts of the body are expressions of digestive troubles.

The gastro-intestinal tract is supplied and controlled by two sets or systems of nerves; the vagus and sympathetic, and many nodes and plexuses which are capable of activating the canal independently of the brain and spinal cord. The vagus arises from the floor of the fourth ventricle. The sympathetic nerves arise from or are connected with the ganglionic nodes from the anterior and posterior roots of the spinal nerves. The vagus extends from the esophagus to the descending colon, according to Gray; only to lower end of the small intestine, according to Gaskell.

The vagus supplies the activating fibres. That portion of the large intestine not reached by the vagus is activated by the pelvic nerve which arises from the sacral portion of the cord.

The sympathetic fibers to the stomach, liver, spleen, pancreas, small intestine, ascending and transverse colon are connected with the semilunar and superior mesenteric ganglia; the fibers to the descending colon, sigmoid and rectum are from the inferior mesenteric ganglion.

"In the innervation of the gastro-intestinal tract, the para-sympathetics are the activating nerves for both smooth musculature

and secretory glands, while the sympathetics are the inhibitory nerves. This holds true for all parts of the digestive tract with the exception of sphincter muscles. The sphincter muscles are activated by the sympathetics and inhibited by the para-sympathetics." (Gaskell and Pottenger).

Digestion is mechanical and chemical. The chemical process stimulates the mechanical and the mechanical certainly facilitates the chemical. Mastication, deglutition, mixing of contents in the stomach, emptying of the stomach contents, passage of the food through the small bowel, squeezing the water out of the refuse and emptying of the refuse are mechanical. Only two of these, mastication and defecation, are entirely voluntary; deglutition is partly voluntary and partly involuntary. Unfortunately defecation is sometimes involuntary, often neither one nor the other, and like the balky mule, needs persuasion.

While the intake of food is absolutely necessary the outlet of refuse is equally essential. The motor function of the stomach is just as important as the secretory function. Mastication and deglutition should be a pleasure to every one, digestion should be unconsciously performed and defecation a conscientious habit. Mastication is essential to the nourishment and preservation of the teeth, though it is wearing on the grinding surfaces. It stimulates the circulation to the gums and roots of the teeth, it helps to polish the enamel and prevents decay. It increases the flow of saliva and mixes the secretion from the salivary glands with the food. It grinds the food to a soft permeable mass; it breaks the cellular capsule so that the digestive juices can reach the contents of the cell.

Cellulose will absorb water but it is not soluble nor digestible. If the cellular capsule is not broken by cooking or mastication the cell passes through the canal as it entered; however, it may irritate the walls of the canal or block the passage and thus cause trouble.

Mastication enables us to detect hard

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sharp objects in food and to remove them. Objects that have so often lodged in the throat would not have done so had the food been properly masticated. Mastication brings out the taste of food and prolongs the pleasure of eating. By grinding the food and mixing it with the saliva swallowing is made easy. The thorough mixing and the increased amount of saliva facilitate starch digestion.

The saliva stimulates or increases the taste, helps to increase the appetite, neutralizes some of the gastric acid and plays a bigger part in digestion than we have yet discovered. Every one knows the importance of mastication but few profit by the knowledge. Mastication hastens gastric digestion, or we might say properly masticated food enables the gastric juice to reach each particle and does not mechanically delay the passage through the stomach.

This can be illustrated by chewing a piece of meat, placing it in filtered gastric juice and keeping it in an incubator for several hours. In another container put a piece of meat of the same size, not masticated, keep both specimens at 37 degrees C. for four hours; the masticated meat will be digested, the unmasticated meat will not be changed except on the surface; further, the unmasticated meat will not be digested in forty-eight hours.

Pieces of unmasticated chicken have been removed from the stomach after remaining 12 to 24 hours. I have known stewed oysters to remain in the stomach 48 hours. A hearty meal of unmasticated coarse food will cause violent peristalsis and pain for several hours; if the patient does not vomit the peristalsis will stop, the secretions of the stomach will decrease or cease to flow, the patient will become stupid and sleepy; later on the secretions may increase, digest part of the food and enable the stomach to pass its overburden into the intestine and eventually empty itself.

The first condition is due to over stimulation of the vagus, the second to depression of the vagus or over stimulation of the sympathetic. Sometimes the vagus may be so deeply depressed and the sympathetic so much stimulated by shock, that there follows complete dilatation of the stomach and small intestine from which the patient fails to recover, and soon dies from poisons derived

from the contents of the gastro-intestinal tract.

Large pieces of fruit, vegetables, etc., may pass the pylorus and irritate the small intestines to violent contractions and secretion, manifested by pain in the region of the umbilicus and probably diarrhea. They may even obstruct the bowel. Too much cellulose is prone to cause fecal impaction.

Coarse particles may cut or scratch the mucous membrane in any part of the canal. They are especially irritating to gastric and duodenal ulcers, typhoid ulcers and inflamed conditions of the small and large bowel. They necessarily increase peristalsis which may be undesirable.

We remember the text book summary of the digestive processes; i. e., the saliva digests some of the carbohydrates; the stomach digests proteins, coagulates milk, liberates the fat cells from their membranes; the pancreatic secretions digest proteins, starch and fats, and coagulate milk.

The small intestine takes care of the foods that are not digested by the stomach and pancreatic secretions. The large intestine by the aid of bacteria carries the process still further and after separating the nutrient properties from the contents pass the refuse on to the sigmoid and rectum and eject it.

We know that we have four kinds of food; water, inorganic salts, proteins, carbohydrates and fats. The water and salts are not digested, and water is not absorbed by the stomach.

What happens when we take a glass of milk into the stomach? The milk is coagulated, the water set free, the casein is precipitated, the fat globules are set free, the water and salts are passed on to the small intestine, most of the protein is changed to peptones, the milk sugar is converted into lactic acid and grape sugar, some of which is absorbed by the stomach. The remaining mixture is passed over to the small bowel mixed with the pancreatic secretion and bile which split up the fat globules, digest the casein and convert the sugar into an absorbable condition. Some of this is not digested until it reaches the cecum.

Bread contains proteins, fats, water, salts and largely carbohydrates. If properly masticated the starch digestion begins in the mouth and continues in the stomach until the

gastric acid stops it; it is again taken up in the intestine where it is mixed with the pancreatic and intestinal secretions and bile. Some of the protein is digested in the stomach, some in the small intestine principally in the cecum. The fat of bread is digested in the small intestine. Most of the starch is digested in the small intestine and cecum; many of the starch cells retain an unbroken cell membrane; these pass into the colon where the bacteria break up some of the cell membranes and other bacteria convert the sugar into lactic acid and alcohol. The feces contain a considerable number of starch cells.

Meat is protein, fat and water. Some of the protein material is digested by the gastric juice; much of it is passed to the intestine. The fat globules are liberated but not digested by the stomach. The peptones and undigested parts are passed on to the intestine to be acted upon by the pancreatic and intestinal secretions and bile. The fat is digested and absorbed in the small intestine. Some of the protein mixed with the pancreatic and intestinal juices passes into the cecum where the process of digestion is completed.

Vegetables contain water, salts, proteins, fats and carbohydrates, the carbohydrates predominating. All vegetables are made up of cells; the cell membrane is often thick. The cellulose is not acted upon by any of the digestive juices but some of it is acted upon by bacteria. The albumens and proteins are digested in the stomach and in the intestine. The vegetable fats are not split up in the stomach but in the intestine. The starch is digested by the pancreatic and intestinal juices in the small intestine and cecum.

The stomach absorbs a slight amount of grape sugar, the other foods are absorbed by the small intestine, cecum ascending colon and part of the transverse colon.

Digestion began in the Garden of Eden. Indigestion, from the standpoint of antiquity, holds it a close second.

We all remember the lure of a red apple on the topmost limb of a tree and we have a faint recollection of the pangs produced by half chewed green apples when we were boys. Whether or not the apple that Mrs. Adam gave to her husband was green or whether he chewed it a long time or swallowed it in chunks the Bible does not tell us. However, it does tell us that on account of the apple he

lost a most pleasant condition and found a very arduous vocation.

SUMMARY

The digestive system is influenced by the mental and physical body.

The vagus nerve is the activating factor of the musculature and secretory glands.

The sympathetic nerves are the inhibiting factors.

The spincters are activated by the sympathetics and inhibited by the vagus.

The stomach and intestines have nodes and plexuses that seem to be independent of the cerebrospinal system.

Mastication is an important digestive process.

The motor function of the stomach is its most important function.

Fats are digested and absorbed in the small intestine.

Proteins and starches are digested largely in the cecum.

The descending colon, sigmoid and rectum (according to Gaskell the entire colon) are activated by the sacral nerves and inhibited by fibres from the inferior mesenteric ganglia.

Cellulose is not digested, and though it has caloric value it is not a food.

DISCUSSION

Dr. A. L. Gray, Richmond:

This paper of Dr. Burke's, as he stated in the beginning, tells us nothing new, but if we should have more such papers every once in a while before a general society, the society would be very much better, we should be made very much better doctors, and we should be able to treat disease of the gastrointestinal tract with a great deal more intelligence than we do. I wonder how many of us here know just what the modern physiology of digestion is, and could say the whole thing before Dr. Burke began. One of the things he mentioned is the function of mastication. We generally think of mastication as a necessary thing, in order to be able to swallow, and to get the taste of our foods, but that is not the most important thing, by any means. Did you ever think that the digestive juices can act only on the surface? They do not strike through the interior of things; they can act only on the surface,

Suppose we had a cube, each face of which contained four square inches, how many square inches of surface would that present? There are six surfaces to a cube, so that would be 24 square inches of surface. Now, let us break up that cube into cubes with faces one inch square. Each one of those cubes presents six square inches of surface. How many cubes are there? There are 8, so you have 8×6 or 48 square inches of surface—just twice as much. The chief function of mastication is to break up our food so that the digestive juices will have more surface to act upon. When we sit down to eat we do not think of the function of mastication at all; we just sit there and enjoy ourselves and chew and talk.

Dr. Burke, closing:

I have nothing to say except that I am

experimenting with the different kinds of foods in incubators, by chewing the foods and then putting them in solutions taken from the stomach. I weigh the foods before putting them into the incubators, and use one that has been masticated and one that has not been. You would be surprised to note the difference. Take a piece of meat weighing half an ounce; if thoroughly masticated it will be digested in four hours. I examine the specimen every two hours, then keep the solution in the incubator until thoroughly dry. The one digested showed a little dust in the bottom of the bottle; the other looked much the same as when it was put in. Take beans or peas, which have a capsule around them; if the capsule is not broken they can not be digested. The capsule has to be broken by cooking or mastication, preferably by cooking.



CLINICAL OBSERVATIONS ON THE BLOOD CAPILLARIES

IRVING S. BARKSDALE, M.D., Greenville, S. C.

From the Department of Physiology, Medical College of the State of South Carolina, Charleston

Boas has contributed much to medical science by his very exhaustive and painstaking researches on the blood capillaries in both health and disease. He has shown that circulatory insufficiency may be often traced to the capillaries. He has also shown that in vascular hypertension the capillaries are usually long and thin, and that in long standing heart disease, with repeated attacks of decompensation the venous loop is thick. One of the most interesting observations in Boas' series of experiments was a group of 47 patients with hypertension. Twenty-eight of these had a normal or low capillary pressure while the remaining 19 had a high pressure. A normal capillary pressure was put down as being below 30 millimetres of Hg, and abnormally high ones ranged anywhere from 30 to 90 millimetres. Eight of the 19 patients with abnormally high capillary tension died within a year of the first observance of this high pressure, whereas of the 28 with normal or low capillary pressure only 5 died.

Carrier has also made some helpful contributions in his studies of the actions of certain drugs such as adrenalin, histamin, pituitrin, acetylcholin and others. H. H. Dale and A. N. Richards, Leonard Hill, Krogh, Hooker, Policard, and numerous other investigators have also contributed much. A bibliography of their works is shown at the end of this article.

A number of observations on the blood capillaries were carried out in both healthy and diseased individuals by employing the following method:

An illuminator (Central Scientific Co.) equipped with a 400-watt incandescent bulb with two plano-convex lenses as a condenser was used. The parallel rays of light were made to pass through a large biconvex lens mounted on the apparatus between the condensing lenses and the microscope in order

that the illumination of the capillary field beneath the microscope objective might be intensified. The light was colored a faint blue by passing it through a piece of cobalt glass. A drop of cottonseed oil was placed on the finger at the base of the nail so as to obviate the reflection of light from the papillae of the skin. A Spencer monocular microscope was used and the best results were obtained with magnifications of 160 diameters (lower power.) Such an apparatus is quite compact and easily portable as it consists only of a microscope and illuminator with cobalt glass, condensers and converging lens attached. A smaller illuminator has been devised by the writer which may be carried in the vest pocket; the small pocket microscope manufactured by the Bausch and Lomb Optical Company may be readily used with this device.

THE CAPILLARIES IN HEALTH

It is found that the normal capillary vessels appear in rows of hair-pin shaped loops, the first row being characterized by elongated loops due to the flattening out of the papillae of the skin. In the succeeding rows, from below upward, the capillaries appear quite shortened, and become comma-shaped as only the highest part or the point of the most acute bending is visible. The arms of the capillary are invisible as they are obscured by the overlying tissues. The arterial arm of the capillary loop is uniformly smaller and straighter than the venous arm and the point of acute bending is the point of the greatest calibre. Not all of the vessels are opened to the passage of blood; many are partially closed, whereas others are quite impervious. There are also degrees of dilatation.

In studying the capillaries at the base of the nail in 50 apparently healthy medical students, wide variations were noticed in respect to length and shape. Many capil-

laries corresponded with Boas' description of the normal; however, many of them were short and staple-shaped with very short arms, while others presented rather dilated venous arms which were very wavy in appearance. In some there were numerous shallow waves, from 4 to 6 in number in the venous loop, while others had but one wave. Not many distorted or twisted vessels were seen and neither were small calibred ones generally present in any single microscopic field. Practically all capillaries which contained any blood at all were well filled and engorged at one moment, and then shortly there was much less blood in them. There were a few empty capillaries as might be expected since Krogh has so definitely shown that most of the capillaries in resting muscles are so tightly constricted as not to allow the passage of blood. (See Figs. 1 and 2.) There

emptying into one of the venules of the more superficial plexus of venules. A number of blood pressures were taken and found to be rather low. These subjects all had very widely dilated capillaries in all of the fields examined. Physical examinations done on those with very thin skin and concomitant elongated capillaries proved to be negative.

THE CAPILLARIES IN DISEASE

The capillaries of patients with arteriosclerosis and its complications, tuberculosis and typhoid were studied on the wards of the Roper Hospital. There was also quite a variation of morphology in these, hence it will be difficult to report anything typical. However, the capillary findings in one or two cases of each group of patients will be described.

ARTERIOSCLEROTIC SERIES



Fig. 1. Normal capillaries. 160 X.



Fig. 2. Normal Capillaries. 160 X.

were a number of students with thin, atrophic skins and this rendered the subcapillary plexuses plainly visible. The arterial arm of the capillary loop was seen to arise from a larger blood vessel (arteriole), very deeply placed, and beneath the venous plexus. From the larger vessel the arterial arm passed upward to the surface of the skin where it became the venous arm just beyond the point of greatest curvature. The venous limb was then traced with little difficulty to a point of

Patient No. 4, Fig. 3, Mr. P., aged about 55 years, blood pressure 166/46, pulse pressure 120, diagnosis, chronic myocarditis, chronic interstitial nephritis.

The capillaries were generally markedly constricted, and quite elongated assuming the shapes of bent hair-pins. A few long slender arcs were seen, also a few serpentine and slender, hook-like forms bearing resemblance to a shepherd's staff. Occasionally the hair-pin-like forms were seen to be super-imposed



Fig. 3. Capillary bed at base of finger nail of right ring finger. Mr. P., diagnosis chronic myocarditis, chronic nephritis, arteriosclerosis. Blood pressure 166/46, pulse pressure 120.

upon one another in groups of from 3 to 5 capillaries.

There was but very little blood in the vessels due to the marked general constriction. It was difficult to observe the flow of blood for this reason, and in those vessels in which the flow was observed, the corpuscles were seen to pass through in single file, or occasionally two abreast. No intermittency of flow could be detected and no peristaltic waves in the walls were noticed.

Patient No. 3, Mr. F., aged 50, blood pressure 115/80, pulse pressure 35, diagnosis, arteriosclerosis, right sided hemiplegia, following cerebral hemorrhage.

The capillary beds at the base of the nails of the middle finger, both right and left were studied. On the sound side, the capillaries were of a shallow arched type with a few serpentine forms. There appeared to be slight general dilatation of the vessels and the bloodflow was quite intermittent in all. Many capillaries, however, were in a state of moderate constriction admitting of very little flow, whereas a few were in a state of absolute constriction.

On the paralyzed side, there was a marked difference in the capillaries in that there were comparatively few of the shallow arched type; here they were much more dilated and rather long curved hair-pin and hook shaped

forms predominated. The venous loops were very much larger than the arterial, and there was but slight curvature of both arms with the absence of tortuosity. As the capillaries were more dilated than those of the sound side, the bloodflow was more rapid. There was but very little intermittency of flow.

It is quite possible that the more pronounced dilatation of the capillaries on the paralyzed side might be due to the spasticity of the muscles which is a state of exaggerated tonicity due to the release from cerebral inhibition brought about by damage to the upper motor neuron. The muscles are in a state of constant function, to no particular end to be sure, yet it is apparent, according to the findings of Krogh, that the capillary dilating hormone of active muscle is here present and constantly at work. Furthermore, we should assume that muscles in a spastic state require more oxygen, hence the capillaries are dilated that this need may be furnished. It would be interesting to study the capillaries in flaccidly paralyzed limbs. Another case was studied and the same findings were presented. See Figs. 4 and 5.

TUBERCULOUS SERIES

Four patients were studied, and the findings in these were quite uniform. Below are given two brief descriptions which are typical.

Patient No. 1, Mrs. K., aged 22, blood



Fig. 4. Capillary bed at base of finger nail of right ring finger. Mrs. De L., diagnosis arteriosclerosis, hemiplegia, diabetes mellitus. Blood pressure 143/90, pulse pressure 53. Sound side. 160 X.



Fig. 5. Capillary bed at base of finger nail of left ring finger. Mrs. De L., diagnosis arteriosclerosis, hemiplegia, diabetes mellitus. Blood pressure 143/90, pulse pressure 53. Paralyzed side. 160 X.

pressure 92/38, pulse pressure 54, diagnosis, chronic pulmonary tuberculosis (far advanced).

The capillaries of this patient were markedly elongated and dilated. Serpentine, shepherd-crook-like, arc-shaped and long wavy types were seen. The arteriolar loops were more dilated in proportion to the venous loops, thereby making the arteriolar limb

almost equal to the venous in diameter. The point of the greatest curvature was the site of the greatest dilatation. The bloodflow was slow and intermittency was noted in a regular rhythmical manner, a large volume of blood passing through a capillary at about 5 second intervals. The walls of the minute vessels suggested peristaltic movements in the portion of capillary containing the great-



Fig. 6. Capillary bed over the base of finger nail of right ring finger. Mrs. K., diagnosis chronic pulmonary tuberculosis. Blood pressure 92/38, pulse pressure 54. 160 X.



Fig. 7. Capillary bed at base of finger nail of right ring finger. Miss M. M., aged 19, diagnosis chronic pulmonary tuberculosis. 160 X.

est volume of blood. The uniformly elongated and extremely large capillaries found in each case of tuberculosis in this series may be sufficient explanation to account for the usual hypotension of chronic pulmonary tuberculosis. See Figs. 6 and 7.

Patient No. 4, Mrs. B., diagnosis, pleurisy with effusion, probably tuberculous, as there was nothing else to account for fluid in the left pleural cavity.

The capillaries in the fingers of this individual bore a marked resemblance to those of the other patients in this series, but were not as elongated and dilated. Intermittency of flow was less pronounced and occurred at greater intervals of about 5-8 seconds. Hair-pin forms with greatly dilated venous arms and shepherd-crooks with 3-8 waves in the handles predominated over all the rest. The arteriolar loops of the shepherd-crook forms were much larger than those of the hair-pin forms, and it should be inferred that the former are more pathological than the latter. There seemed to be more intermittency of flow in those that are thought to be more pathological, viz., the shepherd-crook variety with wavy handles. See Fig. 8, and compare with Figs. 6 and 7.

TYPHOID SERIES

Only 3 patients with this disease were

available and two descriptions will be presented.

Patient No. 1, Mr. J. H. P., aged 63, diagnosis, typhoid fever. Observations of the capillaries of the finger were made about a month after the onset of the first symptoms.

The capillaries were staple-shaped slightly elongated over the usual length, a little dilated and both arteriolar and venular arms were about the same diameter, usually with a slight preponderance of the venular arm. Practically all of the capillaries were of this uniform shape and size, although some occurred as those which are seen in most normal individuals.

See Fig. 9 and compare with Fig. 10.

Patient No. 3, Mr. S., diagnosis, typhoid fever; observations on this man's capillaries were taken about 10 days after the onset of symptoms. The capillaries appeared more like those noticed generally in normal individuals, than those in the two previous patients in this series. The majority of the capillaries appeared to be slightly dilated and hook-like, also with one or two waves in the venous arm of the loop. No intermittency of flow was noted. The capillaries in this case of short duration are not unlike those which are usually encountered in the normal.

Other diseases have been studied but not



Fig. 8. Capillary bed at base of finger nail of right ring finger. Mrs. B., diagnosis pleurisy with effusion, probably tuberculous in origin. 160 X.

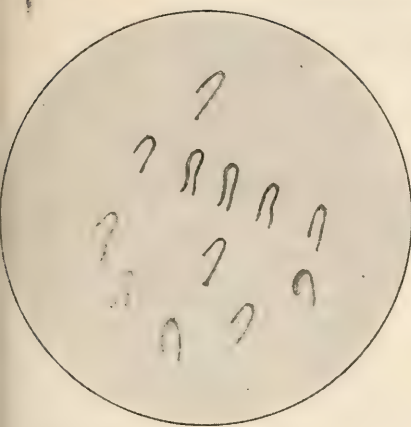


Fig. 9. Capillary bed at base of finger nail of right ring finger. Mr. J. H. P., aged 63, diagnosis typhoid fever. 160 X.

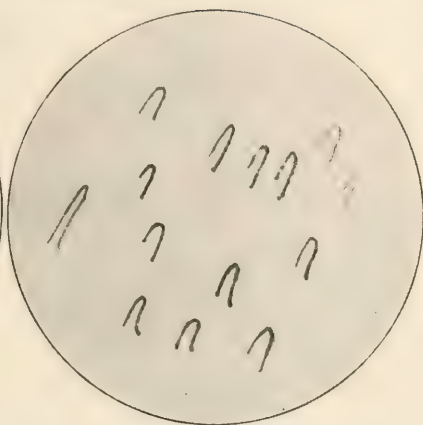


Fig. 10. Capillary bed at base of finger nail of right ring finger. L. S., age 15, diagnosis typhoid fever. 160 X.

enough clinical material has been available for further description. The present state of our knowledge of the blood capillaries in disease is so meagre that very little aid to diagnosis can be drawn from this source.

CONCLUSIONS

In studying the blood capillaries in the fingers of 50 apparently healthy young men, a criterion for the normal was not definitely established due to the fact that wide variations in respect to form and length were observed.

In patients with arteriosclerotic hypertension, the capillaries were found to be narrowed uniformly.

In two cases of hemiplegia following cerebral hemorrhage, the capillaries on the paralyzed side were found to be more dilated than those on the sound side.

The capillaries at the bases of the finger nails were found to be widely dilated in all of the four tuberculous subjects studied.

These vessels were studied in three cases of typhoid fever and nothing remarkable was noted.

While our clinical studies on the capillaries may be very interesting in accounting for various circulatory phenomena, they will be, no doubt, of little value as an aid to diagnosis in other diseases. It is very hard to conceive of just how any specific bacterial toxin can

produce any definite and characteristic change in the morphology of the blood capillary. Further work should be devoted to their behavior under normal conditions and when there is clinical evidence of disturbed physiology of the cardio-vascular system.

*Health Department,
Greenville, S. C.*

BIBLIOGRAPHY

- Boas, Ernst P.: "The Role of the Capillaries in Circulatory Disorders," *Med. Clinics of N. Amer.*, Jan., 1922.
- Boas, Ernst P.: "Clinical Observations on the Morphology and Function of the Capillaries," *N. Y. Med. Jour.*, Vol. 117, May 2, 1923.
- Carrier, E. B.: "Studies on the Physiology of the Capillaries," "V. The Reaction of the Human Skin Capillaries to Drugs and Other Stimuli," *Amer. Jour. of Phys.*, 61.
- Dale, H. H., and Laidlaw, P. P.: "Histamine Shock," *Jour. of Physiology (British)*, Vol. 52, 1918-1919.
- Dale, H. H., and Richards, A. N.: "Histamine Vasodilatation," *Jour. of Physiology (British)*, Vol. 52, 1918-1919.
- Danzer, C. S., and Hooker, D. R.: "Determination of the Capillary Blood Pressure in Man with the Micro-Capillary Tonometer," *Amer. Jour. of Phys.*, Vol. 52, 1920.
- Hill, Leonard: "Capillary Pressure and Oedema," *British Med. Jour.*, Jan.-June, 1921.
- Hisinger-Jagerskiöld, E.: *Finska Lakaresällskapet, Helsingfors*, May-June, 1922, 64, Nos. 5 and 6.
- Abstract, J. A. M. A., Aug. 26, 1922.
- Hooker, D. R.: "Functional Activity of the Capillaries and Venules," *Phys. Reviews*, Vol. 1, 1921.
- Krogh, August: "The Supply of Oxygen to the Tissues and the Regulation of the Capillary Circulation," *Jour. of Physiology (British)*, Vol. 52, 1918-1919.

Mayer, Katharine: "Normal Infant's Capillaries," Amer. Jour. of Diseases of Children, Vol. 22, 1921.
 Policard, A.: "The Contractile Capacities of the Blood Capillaries: Mechanism of Their Actions," La

Presse Medicale, Dec. 26, 1923.

Van de Erve, John: "The Newer Physiology of the Capillaries," Journal of the South Carolina Medical Society, Vol. XIX.

INAUGURAL EXERCISES MEDICAL COLLEGE OF VIRGINIA

Dr. William T. Sanger, after one year's service at the Medical College of Virginia at Richmond, was formally inaugurated president of the institution on Monday, May 31, 1926.

The principal speakers on the morning program were Governor Harry Flood Byrd, of Virginia; Chancellor Samuel P. Capen, University of Buffalo; Eppa Hunton, jr., president of the Richmond, Fredericksburg and Potomac Railroad and chairman of the board of visitors of the Medical College of Virginia; Dr. B. M. Randolph, of George Washington University; and President Sanger. On the evening program the speakers were Dean J. C. Flippin, representing the University of Virginia; Dr. Wyndham Blanton, Hampden-Sidney College; Dr. Stuart McGuire, retiring president of the Medical College of Virginia; Dean C. B. Jordan, Purdue University; Dean Charles R. Turner, school of dentistry, University of Pennsylvania; and Miss Ethel Smith, secretary the Virginia State Board of Examiners of Nurses.

President Sanger was trained at Bridge-water College, Indiana, Columbia, and Clark Universities. From the latter eleven years

ago he received the degree of doctor of philosophy in psychology. Recently he was awarded the honorary degree of doctor of laws from Hampden-Sidney College, which eighty-eight years ago started a department of medicine in Richmond, Virginia, which eventuated in the Medical College of Virginia with schools of medicine, dentistry, pharmacy, and nursing.

President Sanger has had many kinds of educational experience in work from the elementary grades to the graduate school. He has been a college dean and for three years prior to his coming to the Medical College of Virginia he was secretary of the Virginia State Board of Education with important State-wide duties.

Doctor Sanger is a young man and his selection as head of an old and progressive professional college has been approved enthusiastically by those who understand the need of aggressive expert educational leadership in professional education at this time.

During this first year of President Sanger's administration more than a half million dollars has been raised for the further development of the Medical College of Virginia, and other large gifts are in prospect.



PRESIDENTS' PAGE

Medical Society of the State of North Carolina

JNO. Q. MYERS, M.D.

The ideals of the medical profession have been handed down from generation to generation. We retain in our present status of civilization much that originated and was adopted when conditions were very different from those of today. Fundamental truths do not change; neither do honesty and ethics. The fact that the standards adopted by our predecessors have stood the trying test of many generations is proof that they are sound and will continue to stand, regardless of changing conditions.

There is a cause for every event and like causes invariably produce, under like environment like results.

If there is one thing I hold more important than any other for the fullest development of the Medical Society of the State of North Carolina it is that we study the history of the medical profession that we may with our sons a larger destiny.

Perhaps in this meditation and retrospect it will give us a proper starting point to clearly answer for ourselves the question of what is the reason for and the function of a doctor.

Every act of man, as of all other living things, is dominated by the two instincts of self preservation and the perpetuation of the species. We love that which enables us to attain our heart's desire and we hate that which in any degree interferes with the attainment of this purpose. These two instincts make man fundamentally selfish—selfish and jealous for himself and his offspring.

Religion is man's reaction to adversity and both the priesthood and the medical profession are the tangible response to man's call for help. Originally the spiritual needs and the physical needs were not differentiated. All man knew was that things were going wrong; his selfish desires were not being attained and he sought help. Individuality made some persons more successful than oth-

ers in giving aid and because they were successful the recipients of their ministrations gave to them adoration, gratitude and temporal advantage. The temporal rewards and influence were sufficient to justify some in adopting this as their method of self preservation, and there grew up a class whose business in life was to minister to the needs of those who were in trouble. The better they served the better was the position accorded them among their companions; hence the very high standards of altruistic service originated as a matter of self preservation for this class of ministers. The high ideals of the medical profession were adopted not because doctors were different from other people, but because they were like other people. They had to serve and serve well to live.

The reason for a medical profession is that human beings seek help when and only when they are in trouble. The function of the medical profession is to supply this help the most efficiently and in the most pleasing way. The person who cannot fully accept this postulate had better direct his energies into another channel, for he cannot by the very nature of things ever succeed in medicine.

It is obvious that the family doctor gained the position he held and still holds in legend and story, because and only because he was an all 'round man. Wittingly or unwittingly he gave his life to unselfish service and his very unselfishness placed him on a pedestal which no commercialized specialist has ever attained. Perhaps his life was short and hard but such must be the life of every son of man who gains his bread by the sweat of his face. He was working for an end and voluntarily chose this route.

In adapting ourselves to the present order of things have we unthinkingly discarded some of the virtues of the past while discarding its vices? Are we drifting or have we drifted unknowingly away from that position of intimate relationship with our patients

(Continued bottom next page)

PRESIDENT'S PAGE

Tri-State Medical Association of the Carolinas and Virginia
A. J. CROWELL, M.D.

On Board S. S.,
June 25, 1926.

Dear Dr. Northington:

Sorry to have been so rushed just before leaving home that I was unable to prepare a message to the members of the Tri-State. In all probability I will be so busy from now until my return that I will be unable to have a message for your readers before the September issue of your Journal.

I am very sorry indeed we do not have more of the members of the Tri-State with us. There are twenty-four medical men in our party, some of whom are quite eminent. It is a source of inspiration to come in such close contact with them. Our daily scientific meetings are excellent, so interesting that it is awfully hard to keep within the time limit for the meetings. Dr. Roy Long, of Oklahoma City, acts as chairman of our meetings. It is fine to have the constant companionship, for a long time, of such men.

I am planning a short trip, on my return home, for a number of our men to several of the largest South Carolina cities and hope it will be so profitable and pleasant that they will decide to repeat it, in a way, the follow-

ing year to some of the cities of Virginia. I am planning to make it an organization with restrictions and requirements which will make it worth while and when one fails to take advantages offered by it, his membership will be forfeited. This of course will somewhat limit its membership. It should be fostered by the Tri-State..

So much from a medical standpoint. Now a personal word for our party and trip. We have a very large crowd,—congenial,—steady vessel, good food, fine music and plenty of fun. The young people are having a wonderful time and all seem happy. We had a rather fierce storm for 24 hours which will delay us one day in landing, otherwise everything has been very pleasant. Of course many passengers were somewhat frightened during the storm and their digestion was very poor as a rule.

June 27, 1926.

In sight of land for some time. Stop at Plymouth this afternoon and get off at Cherbourg early tomorrow morning. Everybody well and enjoying himself.

Yours truly,

A. J. CROWELL.

(Continued from preceding page)

which the family doctor held. I think we have. I have no patience with the alibi that people no longer want a family doctor. They do and want him as much as ever. The trouble is *not* with the people but with the doctors themselves. Because the medical profession has drifted away from that class of all around service there has sprung up a horde of cults who seek to fill that void in the lives of men. Go where you will and you will find the number of cults and cultists to be in inverse ratio to the number of family doctors.

Where the family doctor gives conscientious service there is no occasion nor desire to seek consolation from foreign sources of questionable character.

Fortunately the doctors who themselves were responsible for the rise of these cults

and false counselors are realizing the situation and returning to their proper and original function. The family doctor is again coming into his own, not under the same conditions as a few years ago with a full coterie of assistants, the various specialists. In the new order of things the family doctor is the man in charge and the one to whom the patient and all his family will look for direction and counsel. He it is who will have a perspective view of the patient as a being with a living soul. In keeping with advances in medical science his various specialist lieutenants will serve him and the patient in specific lines, leaving to him the responsibility of coordinating the whole. His job will be that of the commanding general. In medicine, as in all other lines of human activity, one poor general is worth more than two good ones.

SOUTHERN MEDICINE AND SURGERY

Official Organ of the Tri-State Medical Association of the Carolinas and Virginia

Published Monthly by the Editor

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ENGRAVER'S CUTS TO ILLUSTRATE AN ARTICLE MUST BE PAID FOR BY THE ESSAYIST.

Published to make the average doctor better than the average; to improve his information, his usefulness, his standing and his income.

FOR WAR ON MEDICAL FAKERS:

With Field Notes of a Skirmish

The fantastic cults and isms will be energetically opposed and exposed at every opportunity.

The foregoing statement was contained in the "Outline of Purpose and Policy" which constituted the first editorial in Southern Medicine and Surgery under its present management.

There was a time when Medicine could not afford to come out in the open; when medical practice was largely superstition with no slight admixture of fraud; when popular remedies for disease included dung and mummy fingers, and even such non-existent things as *dragon's blood* and *unicorn's horn*.

During that time many of our ideas as to the professional dignity of the doctor grew up, and *set*. Professional dignity was a great cloak for ignorance and incapacity then, and even today it has not ceased to so serve.

But there is now no reason for Medicine hiding behind anything; there is every reason for her coming out into the noonday sun and keeping herself on exhibit. Advertise to the world more and more what medical science has done and is doing for the comfort and

happiness of every man, woman and child; and less and less how some doctor "performed a delicate operation," or has some prominent person under his care.

Since our skirts are clear; since we can flatly state what we know and frankly admit our ignorance, we are in a position to expose those who are preying on the public by calling themselves *doctors*, and those inside the profession who imitate their methods.

Frequently we hear it said "every knock is a boost," or "the public will say we are jealous." As to the former, the very fact of there being such a thing as a law against slander is sufficient refutation; also that a serious "knock" of any one of those quoting the sentence will immediately reveal it to him that he does not believe it himself: as to the latter; a certain proportion of the public is made up of individuals whose mental processes are past finding out; these we must dismiss. The remaining great majority would in a few years come to judge doctors and their methods of handling their problems just as they do in the cases of lawyers, carpenters and merchants,—if doctors would let them. But we keep up such a constant pretense of altruism that the public is content to let us enjoy that unique honor,—for which in fact there is no competition,—insisting though that we pay for it.

Men and women do not think a doctor is under any more obligation to give treatment to a man, woman or child who is sick, than is a clothier to give clothes, a baker to give bread or a banker to give money. Caring for the destitute in any of these particulars is a governmental or community function.

And, does the general public show appreciation of the free work done by this one group of citizens? It does not. It rightly regards the doctor as a simple anachronism, makes use of his services, and charges him the same for the privilege of working for nothing, that it charges the lawyer, the chiropractor, the horse and mule dealer, and the peddler, for leave to ply their vocations for pay. When we work for the poor for nothing, we are giving to the city, county or State; when we work for a minister for nothing, we are giving to his congregation;—and the Italians have a proverb which says, "When the poor give to the rich, the Devil laughs!"

The writer once asked a smart and candid

banker how bankers could make their living by hiring out money to the public, collecting in advance, and still leave the public under the impression that the bankers were "accommodating" it. He said that it was a fiction, profitable to the bankers, possible only because of the lack of reasoning powers on the part of the public.

The public is just as well convinced of the untenableness of its position as regards the doctors' obligation to the sick; but it will continue to accept free service as long as we will give it and thereby save money with which to handsomely remunerate all others who serve it.

Are lawyers or merchants deterred by fear of some one crying "jealousy" from insisting that all those who compete with them in business qualify in the same way? They are not; and the public respects them for acting like reasonable beings and demanding protection in their rights. We would do well to stand out frankly and boldly and say we, as business men, demand protection under the law from competition by those who have not qualified under the law. Against fakers in medicine we have the additional legitimate complaint that they add tremendously to the difficulties of Public Health work, thus adding to our burden of taxation; and, finally, that they produce unnecessary suffering in many ways not the least of which is encouraging ill persons to disregard rational advice, thus allowing the diseases to pass beyond the curable stage.

Reasoning along these lines brought the writer to the determination to exert himself to make North Carolina an uncomfortable place for those who come in to tamper with the health and tap the pockets of her people, to the point of making them wish they hadn't come, and of causing them to tell the news to their motley brotherhood and sisterhood, so that all of this ilk would check North Carolina off their lists of boob States.

The first real opportunity which has presented for functioning along this line came in the past month. On the morning of June 10, the editor saw it stated in a newspaper that a certain person had come to Charlotte to tell us about many things. It was stated that "North Carolina's healththorium, of which Dr. Stevenson is the founder, is the realization of a 20-year ambition. It is a place for people

with tired nerves or bodies who are seeking rest and *rejuvenation*, according to Dr. Stevenson. Here the *patient* may 'get back to natural foods, sunshine, outdoor living and right thinking' the psychologist says."

Never having heard of "North Carolina's healththorium," or any other "healththorium," and sharing with the Athenians the wish "to hear some new thing," we expressed a desire for an interview. In the course of this interview, marvelous cures by her "method," including the restoration of sight to the blind, were glibly recounted. So much was said about *patients* that the interviewer was moved to ask if the interviewed were possessed of a license to practice medicine in North Carolina; then it came out that these were not really "patients," but "students" who were to be taught "right living and right thinking." "Change the soil of your thoughts" was the advice. The "doctor" said her institution had appointed a "consulting staff" from among the most prominent doctors of the State. She did not mention the honoraria!

"I am not hostile to the doctors," said "Dr. Stevenson"; "my brother is the chief surgeon of one of the largest hospitals in France." Finally she designated the American Hospital in Paris as the institution, and said she was a graduate of the medical school of Geneva University. A cablegram was despatched, with what result will appear later. On the 13th (Sunday) there appeared a two-column photograph under which was printed in bold face type, in addition to the words attributed to Arthur Brisbane, "An intimate friend of the late Sarah Bernhardt, a co-worker with Pasteur, author, lecturer and dietitian, Dr. Julie LaSalle Stevenson was called 'the Bluebird of Happiness,' by Maeterlink, the Belgian poet. She will lecture at the Hotel Charlotte during this week, beginning Monday night." A sub-head called her an "internationally known health authority, dietician and author."

We had no means of communicating with "The Divine Sarah," but some of the others having mundane addresses, we sent out a few inquiries.

The meeting of the Medical Society of the State of North Carolina happening to come in the next week, the editor had an opportunity to bring this case before the doctors of

the whole State, with what result will appear further on.

Soon after returning from the State Society meeting the Mecklenburg County Medical Society met and took this action:

Whereas, at the final session of the Medical Society of the State of North Carolina, held at Wrightsville Beach June 16, 17 and 18, the Society enthusiastically voted that the President appoint a committee, *with power to act* for the Society on the case of one styled "Dr. Julie LaSalle Stevenson," now or recently holding forth in Charlotte, the Mecklenburg County Medical Society deems it incumbent on it to investigate this matter at this time.

We find that:

(1) The Charlotte Observer of June 10, 1926, carried a "news story" laudatory of "Dr. Stevenson" and quoting her freely, containing the stock preamble of her having been given up twenty years ago "when specialists declared she could not live, suffering as she was from an incurable disease"; and that "Dr. Stevenson is the founder of North Carolina's 'healthorium'"; which institution can not be found in the State but which, now, "Dr. Stevenson" says she is to establish at Lake Lure.

(2) That "Dr. Stevenson" represented herself to be the sister of the chief surgeon of the American Hospital in Paris, as to which representation we submit the following cablegrams in evidence:

"Charlotte, N. C., June 10, 1926.

"Chief Surgeon,
"American Hospital,
"Paris, France.

"Lady styled Doctor Julie L. Stevenson here says she is your sister. Please affirm or contradict.

"J. P. KENNEDY.

"Secretary Mecklenburg County Medical Society."

"J. P. Kennedy,
"Mecklenburg County Medical Society,
"Charlotte, N. C.

"No such person known here.

"DOCTOR GROS,

"American Hospital, Paris,

"3 28 P Jun 11."

(3) That on June 13, 1926, the Charlotte Observer carried an editorial commending "Dr. Stevenson" as a personage of international reputation, and saying "she leaves a trail of good wherever she goes"; and that on the same date, in bold face type the Charlotte Observer stated "'God was kind to man' says Arthur Brisbane, 'when he gave the world this radiant woman.'" As to which statement the following telegrams are submitted in evidence:

"Charlotte, N. C., June 13, 1926.

"Arthur Brisbane,
"New York American,
"New York City.

"Story local newspaper quotes you 'God was kind to man when he gave the world this radiant woman.' Dr. Julie LaSalle Stevenson. Please wire confirmation or denial.

"SOUTHERN MEDICINE AND SURGERY."

"New York, N. Y., June 14, 1926.

"Southern Medicine and Surgery,
"Charlotte, N. C.

"So far as I know never heard of lady mentioned

your wire. Did not write the statement attributed to me.

"A. BRISBANE."

Resolved:

(1) That we hold it an act prejudicial to the health of the people of the State for a newspaper to give space to claims of any one representing himself or herself as qualified to advise in matters of health, until testimonials have been carefully investigated, by direct communication when possible, and where this is impossible by calling the matter to the attention of the local medical society and hearing what evidence they may be able to present;

(2) That we submit the case of "Dr. Julie LaSalle Stevenson" on the evidence adduced;

(3) That we give this evidence and this action as wide publicity as is practicable, and

(4) That in the interest of the physical and mental health of the people of North Carolina, we urge similar action on the part of all regular medical bodies when similar situations arise.

J. P. KENNEDY, M.D.,
Sec. Meck. Co. Med. Soc.

This action was given space in *some of* the copies of the Charlotte Observer of Sunday, June 20, under the heading "Medical Society's Attack on Dr. Stevenson Stirs Defense Reply." The outstanding features of this "reply" were, "I do not remember ever having mentioned my brother as being connected with any hospital;" and, "to the best of my recollection I have never authorized the publication of the statement attributed to Mr. Brisbane"; but the juiciest bit for that date is: "when questioned regarding her title of 'doctor,' Dr. Stevenson replied that she possessed degrees from the University of Vienna, the University of Geneva and from the University of Berlin"; but, "when asked for her credentials of scholarship, she lamented that she did not have them with her"!

Letters of inquiry were sent, as follows, to two of which replies of an interesting nature have been received:

June 14, 1926.

University of Paris,
(Medical School),
Paris, France.
Gentlemen:

A person here representing herself to be Dr. Julie LaSalle Stevenson is being advertised as a pupil of Pasteur. If you can give information on this point, you will be rendering a great service to the medical profession of Charlotte and North Carolina and we shall be very grateful.

Sincerely yours,
JAS. M. NORTHINGTON,
Editor.

Institut Pasteur
25, Rue Dutot

Paris, le 29 Juin, 1926.

Monsieur,

En reponse a la lettre du 14 juin que vous avez adressee a l'Universite de Paris j'ai l'honneur de vous informer qu'il n'a jamais existe sur les listes du personnel de l'Institut Pasteur de medecin au nom de Julie LaSalle Stevenson.

Veuillez agreer, Monsieur, l'assurance de mes sentiments distingues,

D. A. CALMETTE.

(Translation)

Sir—

In response to the letter of 14 June which you have addressed to the University of Paris I have the honor to inform you that there has never been on the rolls of personnel of the Pasteur Institute of Medicine the name of Julie LaSalle Stevenson.

Please accept, sir, the assurance of my distinguished sentiments.

D. A. CALMETTE.

June 14, 1926.

Mr. Maurice Maeterlinck,
Villa Les Abeilles,
Avenue des Baumettes,
Nice, France.
My Dear Sir:

I would not presume to address you were it not on a matter which I regard of considerable importance. A person styling herself Dr. Julie LaSalle Stevenson is active in this community in a way which is distasteful to the members of the medical profession, and, among her other publicity schemes, is advertising to the public that you have called her "The Bluebird of Happiness."

The medical profession of the State of North Carolina will be vastly indebted if you will inform us of the truth or falsity of this representation.

Please accept our sentiments of distinguished regard.

Yours,
JAS. M. NORTINGTON,
Editor.

28 Juin Chateau de Medan
1926 Medan par Villenes-Sur-Seine
(S & O)

Cher Monsieur

Je n'ai jamais vu ou connu Mlle. Julie La Salle et avant votre lettre je n'en avais jamais entendre parler.

C'est vous dire que ne je l'ai jamais appele "The Blue Bird of Happiness"

Veuillez agreer, cher monsieur, l'expression de mes sentiments devoues.

MAETERLINCK.

(Translation)

28 June, 1926.

Dear Sir:

I have never seen or known Miss Julie LaSalle and before your letter I had not heard her spoken of.

It is to tell you that I have not called her "The Blue Bird of Happiness."

Please accept, dear sir, the expression of my devoted sentiments.

MAETERLINCK.

My wire to the American Medical Association was, at first, unproductive:

June 13, 1926.

American Medical Association,
Chicago.

Night letter information on Dr. Julie LaSalle Stevenson.

JAS. M. NORTINGTON.

Chicago, Ill., June 14, 1926.

Dr. James M. Northington,
Professional Building,
Charlotte, N. C.

No record of J. L. Stevenson as physician.

AMERICAN MEDICAL ASSN.

On digging deeper something of interest was found, as may be seen from the following letter:

535 North Dearborn Street, Chicago,
June 26, 1926.

Dr. James M. Northington,
Professional Building,
Charlotte, N. C.

Dear Doctor Northington:

On June 13 you sent us a night letter asking for information on one "Dr. Julie LaSalle Stevenson," and we wired back that we had no record of this person as a physician. Today, on going thoroughly into our quackery records, we find a Julie LaSalle Stevens, who may be the person you had in mind.

So far as we have been able to learn, Julie LaSalle Stevens is not a physician—at least we do not find that she has ever attended any reputable medical school in this country or been licensed to practice medicine in any State in the Union. The first record we ever had of her is a clipping taken from the Davenport (Iowa) *Times* of June 25, 1923, giving a picture of the lady with the following context:

"Expert Dietitian Arrives to Cure U. S. Indigestion—Dr. Julie LaSalle Stevens, former dietitian of the late Sarah Bernhardt, has arrived in the U. S. to impart her knowledge of dietetic principals to the American people. She declares that bad health among Americans is due largely to stomach trouble and that the Divine Sarah's long life was due to her adherence to strict diets."

We next heard of her through a clipping from the Newark (Ohio) *Advocate* of September 12, 1923, in which she is again described as Sarah Bernhardt's dietitian and a "dynamic little woman, as well known in Switzerland, Poland, India and China as in her native France, and now about to undertake a lecture tour of the United States."

We have also a clipping taken, apparently, from a St. Petersburg, Fla., newspaper, dated about March 30, 1925. This refers to a campaign conducted by



Note. This is not a typographical error as may be seen from letter of the A. M. A.—Ed.

the Pinellas County Medical Association, in and around St. Petersburg, against physicians who were practicing without a license and stated that "Dr. Julie LaSalle Stevens was arrested on a similar warrant in Clearwater late Wednesday afternoon, according to Dr. Raborn." Among others arrested around that time on similar charges were "Dr." St. Louis Estes and "Dr." Esther Moran.

We have an advertisement run by "Dr." Julie LaSalle Stevens in one of the "McFerrin's Health Bulletins," issued in 1925. The "Bulletin" seems to be issued irregularly and is put out by one Charles B. McFerrin, a food faddist of Chicago and Florida. As might be expected, those who advertise in his columns are either quacks or faddists, and doubtless "Dr." Stevens feels at home among this class. In the issue mentioned, she advertises that her "school for the well, where students will be taught how to guide against most diseases, is now open at 29 Fifth Avenue, New York, in charge of Dr. Julie LaSalle Stevens, international authority in dietetics and nutritions for fifteen years." She claims also that she is forming classes that will afford "Dietetics Courses of 6 Lessons" to "Physicians, Nurses, Teachers, Business Men, Parents, Housewives."

The foregoing gives you all that we have on "Dr." Stevens, and we trust that though it is reaching you late, it will still be of service to you.

Yours very truly,

THE JOURNAL A. M. A.

Bureau of Investigation.

H.

It is a sad commentary on a community that a smooth-tongued stranger would dare come in, without credentials, represent herself as an intimate of many world-renowned persons, and as having been graduated from three great universities; and a sadder one to record that, apparently, these fraudulent representations were accepted as authentic until inquired into by doctors. Is there not need for protection?

This fight is not on an individual, but on

the whole system which this individual represents. Beyond interfering with indulgence in the pleasurable sensations which some individuals derive from contact with the reputed great, and from feeling that they are included in that small, select band to whom it is given to understand things too deep for the coarse minds of the herd, on the one hand; and keeping a lot of dupes from paying out money with which they can ill afford to part for advice which is worse than useless, it is doubtful if much has been accomplished in this instance. The desirable and desired object is to awaken doctors to the possibilities of resistance, and the intelligent portions of the general public to the duplicity and mendacity of this sample of the whole lot.

A copy of this issue will go to every State Society medical journal in the United States, with request for cooperation. One will go to the Journal of the American Medical Association, which association has signified its attitude by supplying evidence.

Caesar noted that in his Gallic campaigns some of the tribes went to battle while others went to war. We want war against medical fakers; war on every front; a war of extermination.

If we are half as zealous for the promotion of the public health and the protection of the credulous weak against the rapacious and unscrupulous strong, as we say we are; if we are half as earnest for the protection of the good name of *doctor* and of our commercial rights as we should be, the time is at hand when doctors will take their rightful place among men, and at death leave something other than uncollectible accounts to their families.

THE MEETING OF THE STATE MEDICAL SOCIETY

The Seventy-third Annual Session of the Medical Society of the State of North Carolina at Wrightsville Beach in the middle of the last month was one out of the common run of "doctors' meetings." This was to be expected since it wrote the concluding chapter in the administration of one whom we can say, without disparagement to any of his predecessors, has the greatest renown of any man who has ever occupied the office of president

of this society.

On every hand was there evidenced a spirit of enthusiasm for the scientific features of the meeting such as to please and encourage those who have thought that maneuvering for office and influence held too much the center of the stage. Even though this is a year in which the Board of Medical Examiners were to be elected, the scientific took easy precedence over the political interest.

The essays and clinical lectures were in general of a high order, not the unsatisfying copies from text-books which keep so many away from medical meetings and cause so many in attendance to wonder why they came.

Several distinguished doctors from distant States were present as invited guests. This is following a pleasing, hospitable custom established many years ago, by means of which we pay deserved compliments to some of those whom we hold in especial esteem, and at the same time find an opportunity to get first-hand information on matters of importance from masters in their respective fields.

The Address of the President was easily the event of the meeting: for breadth of thought, and for statesmanship, no less than for kindness and simplicity it stands out as a forward looking message to doctors, which can not fail to exercise a great influence. In his attendance on County and District meetings, the president had an opportunity to make such observations of conditions in medical circles over the State as to put him in a position to diagnose ills and suggest remedies rationally. He availed himself of this opportunity, and the recommendations made attest the accuracy of his observation and the soundness of his reasoning on the problem of remedies.

The Board of Medical Examiners elected at this meeting is made up of men well qualified by nature and training to pass on the qualifications of applicants for license to practice medicine. In advance, we would say a word of encouragement, against the time when immense pressure will be brought to bear with a view to lowering the bars and obtaining favoritism in given cases. The outgoing board has made a splendid record in standing for impartial enforcement of the features of the law which are the especial concern of medical men. When great pres-

sure was brought to bear to induce relaxation, they stood firm. The new board may feel assured of the backing of the doctors of North Carolina in such a situation.

A considerable number of members in attendance expressed regret that the society should think it necessary to meet in so many sections. That this subdivision is an evil, all will admit; whether or not it is a necessary evil is open to question. Some features of the programme of each section are of interest to every doctor; some would just as well fit into the programme of another section; meeting in larger units does more toward promoting fellowship, and retarding the growth of the feeling on the part of the general practitioner that he is expected to come to the meeting in order that the specialists may have an audience.

Is there any good reason why we should have more than three sections? We will assume that as many as three are essential for the conclusion of a reasonable programme within a reasonable time. Most likely at least half the practice of any general practitioner in North Carolina is on diseases of children; much of it is in obstetrics; and certainly it is much concerned with therapeutics.

Why not unite medicine, and pediatrics, and to these annex therapeutics and obstetrics; add gynecology to general surgery (just where it is in actual practice); and leave diseases of the eye, ear, nose and throat as it is for the third and last section?

The meeting was well attended, especially so considering it was held so far from the center of the State. But many were there for the election of the Board of Medical Examiners; and we do not elect a board every year. There is much sentiment for meeting at the same place each year, and that place is Pinehurst. There the whole meeting is under one roof; there are few counter attractions at the time of year of our meetings; no obligation is imposed on any body of doctors to provide entertainment, as in a large town; the personnel of the Carolina Inn is well experienced in providing for us; and the charges are a good deal lighter and the table better than at some places in which we have met. With all these advantages added to the prime one of central location, we very much hope that, at the Durham meeting it will be decided to meet in Pinehurst annually.

DEPARTMENTS

THERAPEUTICS

FREDERICK R. TAYLOR, B.S., M.D., *Editor*
High Point

In presuming to occupy additional space in Southern Medicine and Surgery, the new Department Editor is smitten with the consciousness of two facts; that he has assumed a real task, and that he has a vast fund of inexperience as an editor from which to draw his material. However, he has for years been acutely conscious of the need of as active work on the part of the medical profession of North Carolina in promoting rational therapy, as there is on the part of some agencies in promoting irrational therapy.

The purpose of this department is not to sling mud. It will condemn where the editor believes condemnation is due, to be sure; but it will also praise that which seems praiseworthy; and it will discuss pro and con, without animus, moot points of interest. It will also abstract from time to time especially interesting reports of the Council on Pharmacy and Chemistry of the A. M. A.

A NEW LAXATIVE ACCEPTED BY THE COUNCIL

Isacen, manufactured by the Hoffmann-La Roche Chemical Works, has certain points of resemblance to phenolphthalein, according to a recent discussion of the drug by the Council, from which this is abstracted. It is stated to be non-toxic, and to be entirely unabsorbed by the body. It is put out in tablet form only, each tablet containing 0.005 Gm. (.075 gr.) It acts as a laxative or purgative according to dosage, one tablet being a laxative dose.

ALLONAL NOT ACCEPTED FOR NEW AND NON-OFFICIAL REMEDIES

Allonal is another drug made by the Hoffman La Roche concern. According to a recent report of the Council it is said to contain a combination of allylisopropylbarbituric acid and amidopyrine, mixed with some more of these two drugs in the free state. The combination of the two drugs seems to be readily decomposed into its two components. The

first named ingredient is claimed by the manufacturers to be a new and distinctive drug of greater hypnotic power than other hypnotics of the barbituric acid series. Amidopyrine is, of course, a well known analgesic. Allonal is recommended for a great variety of conditions, some of which may require a pure hypnotic, some a pure analgesic, and some both. The council seems interested in the new hypnotic drug, but feels it a definite drawback that it cannot at present be obtained by itself for investigation. It seems, moreover, unwise, if a valuable new hypnotic has been discovered, for a physician to have to prescribe it always in association with an analgesic in fixed proportions. The final conclusions of a long report by the council on the drug are as follows:

The Council finds Allonal unacceptable for new and non-official remedies because:

1. "The therapeutic claims advanced are deemed unwarranted by the facts.

2. "The name is not descriptive of its composition.

3. "There is no satisfactory evidence that the administration of allylisopropylbarbituric acid and amidopyrine in fixed proportion (or of a feeble chemical compound of these two that behaves in the stomach like a mixture) is rational.

"The Council is prepared to consider the acceptance of allylisopropylbarbituric acid when it is offered in pure form and with claims that are supported by adequate evidence." (And, we hope, with a manageable name.—Ed.)

A NEW "EPILEPSY CURE" EXPOSED

"The Dr. Hunter Laboratories" of Little Rock, Ark., are advertising a mail order "cure" for epilepsy. Very unsavory records of some of the leading men in the concern are shown by the Journal of the A. M. A. of June 19, 1926. Space forbids detailing this—suffice it to quote the statement that, according to the Police Department of Pittsburg, Kansas, Dr. Hunter was at least twice found guilty of running a house of prostitution. The therapeutic side of the matter can be very

briefly disposed of by stating that the dosage of the "cure" recommended contains sufficient luminal to make up 6 to 8 grains daily. The usual dose of luminal is $1\frac{1}{2}$ grains, and it is considered inadvisable by many authorities to give over 3 grains in 24 hours because of the toxic properties of the drug.

THE KOCH CANCER FOUNDATION

Doubtless many readers of this page have been almost startled by the apparent magnitude of the propaganda put out by the Koch Cancer Foundation, with its "Bulletin" (why not leave off the last four letters of that word?), said to be sent to all the physicians of the United States. The savagery of the attack launched therein against the American Medical Association also seems almost without parallel in recent years. Despite the fact that the Journal has published much material that seems to definitely refute the extraordinary claims of the Koch Foundation, the latter organization continues its spectacular activities.

A friend having furnished this department with some additional Koch literature, we were interested to note in the "Code of Ethics" of the Foundation the following statements:

"4. Make no unreasonable charge for services.

"5. The minimum fee to be charged a patient where but one treatment of the antitoxin is required shall be Three Hundred (\$300.00) Dollars. In cases where further treatments are required, Two Hundred (\$200.00) Dollars additional shall be charged for each further treatment.

"6. Indigent or charity cases may be treated for a nominal sum provided the charitable or indigent nature of the case is vouched for by some accredited charitable organization, or by some stockholder of this organization. In the event that a nominal fee is secured from any such cases, the sum shall be turned over to the Foundation."

Again, in a folder headed "Some Explanatory Statements and the Preparation of the Patient for Treatment," we find,

"The treatment material is effectively masked by a comparatively inert substance, so that it cannot be analyzed. We intend to hold the chemistry secret until the criminal opposition pushed by the A. M. A. has been successfully defeated, and the way has been made clear to dedicate the formula with safety to the cause, and in a way that meets

with self-respect."

Obviously, no comment on the above is necessary to enable the intelligent physician to appreciate this business in its true light.

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

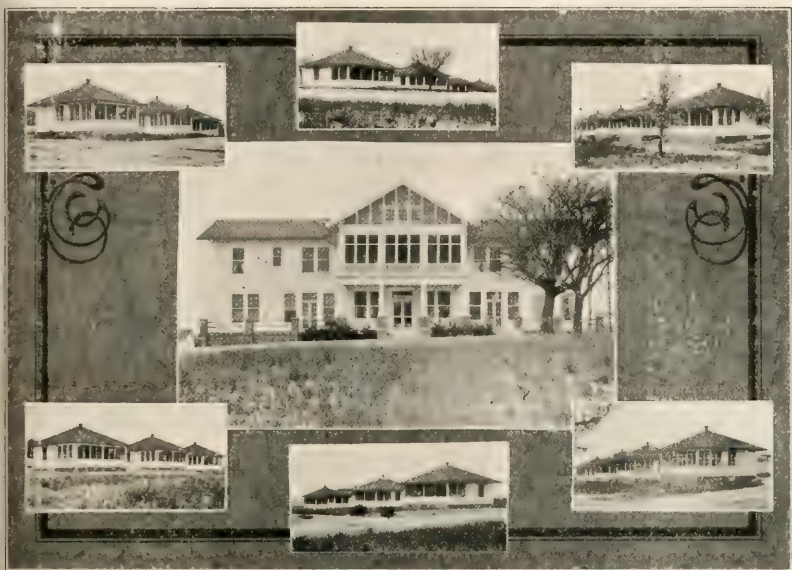
THOMAS JEFFERSON AND RELIGION

Probably the most intimate and character-revealing feature of any man's life is his religion—his attempt to explain himself in terms of his relationship to the Universe and to its Creator. In the Reviewer for October, 1925, J. G. de Roulhac Hamilton, professor of History in the University of North Carolina, writes about Thomas Jefferson and Religion. One hundred years ago on the fourth day of July Jefferson died at Monticello. He had reached extreme age, he had taken an active part in detaching the colonies from Great Britain and in setting up the new government, and in formulating its policies. There is no doubt that the influence of Thomas Jefferson is more persistent and more dominating today in the United States than that of any other man born on American soil. He was not free from faults of character, but he had a restless, an inquisitive, and a philosophic mind, and a degree of courage rarely seen in one who is constantly standing for popular office throughout most of a long life. His entire life was a living declaration of the old Roman phrase: nothing of human interest is alien to me. In his intellectual concern as well as in politics he was democratic to the core. He carried on a correspondence with the great men of the earth of his day about practically all the topics that man had ever thought of, and yet he must have lived on somewhat democratic terms with his agricultural neighbors in Albemarle. He was and he is the most interesting human being that ever lived in North America. Perhaps he is even more alive today than in 1826 when the breath departed from his physical body at his home on top of the little mountain near Charlottesville. The following couplet could be applied in literal truth to him:

"A Prince once said of a Monarch slain,
Taller he seems in Death."

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JAMIE W. DICKIE, M.D., *Physician in Charge,*
Southern Pines, N. C.

What is the explanation of the persistence of his widespread influence amongst all classes of people? His ability to discover wrong, I should say, and the vigor and the courage with which he advocated right. In pre-Revolutionary days in Virginia the Episcopal Church was, I believe, the established church. It was the state church, maintained by a tax placed upon all the people of the colony. That was not strange. Virginia had been settled largely by people who came to it directly from England. These people—amongst them the ancestors of Jefferson—had been accustomed to an established state church. Episcopal clergymen in Virginia were members of the official family of the colony. All other ministers were, I believe, only bootleggers, without real authority to carry on their sacred calling—as much so as a protestant clergyman of today would be to function as the Pope at Rome. Officially, in Virginia, there was no church except the Episcopal church. Jefferson was an Episcopalian. But he developed the idea that every man was entitled to the right to have any kind of religious belief that he felt competent to formulate, or that he might be permitted to live in peace without religious belief at all, if he so desired. Jefferson came to the conclusion that men should be permitted to worship God in their own way, or not at all, if they preferred, and that they should have the right to select and to dismiss and to remunerate their own pastors. That must have been a revolutionary political and religious theory in Virginia when Jefferson summoned up the courage to enunciate it. But he did formulate and enunciate that doctrine and he did it with such courage and persistence and with such skill in marshalling justice and right on his side that he succeeded in bringing the General Assembly of Virginia to adopt the immortal statute for Religious Freedom. Had he accomplished nothing else in his long life his name would live forever. Here is a passage from that bold declaration: "Be it therefore enacted by the General Assembly, that no man shall be compelled to frequent or support any religious worship, place or ministry whatsoever, nor shall he be enforced, restrained, molested, or burthened in his body or goods, nor shall otherwise suffer on account of his religious opinions or belief; but that all men shall be free to profess, and by argu-

ment to maintain their opinions in matters of religion, and that the same shall in nowise diminish, enlarge, or affect their civil capacities." And in correspondence he asserted: "Reason and free inquiry are the only effectual agents against error. It is error alone which needs the support of government. Truth can stand by itself."

It was Jefferson's accession to the Presidency which overthrew the Federalist party. His elevation to that high office, his approval of the French Revolution, and his intimacy with many of the leaders of thought in France, had a tendency to alarm Federalistic and Puritanical New England. The clergy in those parts feared, perhaps not without reason, that Jefferson would make an effort to have all the Bibles burned, the churches destroyed, and religious worship abolished. But Thomas Jefferson was not an irreligious man. He was not an atheist, not even an agnostic. He had no respect for formulated sectarianism, and he had reason to express derogatory opinions about the clergy, who had assaulted and villified him. Of them he said: "They believe that any portion of power confided to me, will be exerted in opposition to their schemes. And they think rightly: for I have sworn on the Altar of God eternal hostility against every form of tyranny over the mind of man."

Hamilton states that Jefferson drew the plans for an Episcopal church in Charlottesville, that he was technically a member of the vestry of that parish. He contributed generously to religious causes, and he read and wrote much about religion. At one time in his career Jefferson was profoundly interested in Calvinism, and he made an effort to import some of the leaders of that school of thought into Virginia, but later he turned from Calvin and his followers with hatred of the dogmatism and the harshness of their doctrine.

Jefferson's correspondence with John Adams, when both had become old men, indicates that he was a profoundly religious man. But he had no orthodoxy. He read the life of Christ, believed in Him, and declared, "Had there never been a commentator there never would have been an infidel."

I quote a paragraph from one of his letters, "I have ever thought religion a concern purely between our Maker and our con-

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science, for which we are accountable to Him, and not to the priest. I never tell my religion, nor scrutinize that of another. I never attempted to make a convert, nor wish to change another's creed. I have ever judged the religion of others by their lives, for it is in our lives, and not from our words, that our religion must be read."

It is a pity that Jefferson's spirit of religious toleration could not be breathed into the American people of today. I wish that every word of Hamilton's essay might be read by every citizen of our country. Jefferson thought clearly, and justly, and always far ahead of the throng. And that has made him immortal.

But what accounts for the origin of his revolt against the established church in his colony? Hamilton does not tell us. Is it possible to find out? Jefferson's father was said to be a harsh, burly tyrannical man in his home. Did the father drive Thomas, in his childhood, into church-attendance Sunday after Sunday, and in that way bring about the formulation of the Statute for Religious Freedom?

THE MENTAL DISEASE PROBLEM

A mind in disorder is a painful situation to observe. Neither laymen nor physicians like to deal with the problem created by such a condition. Yet it is a fact that by far the majority of all hospital beds in the United States are occupied by the so-called insane. There are actually more beds in the various state hospitals of the country than in all the other hospitals of every other kind—general and special, public and private. At the recent annual meeting of the American Psychiatric Association in New York City some of these rather astounding facts were emphasized. Dr. C. Floyd Haviland, one of the State Hospital Commissioners of the State of New York, opened our eyes to some of the large mental disease problems in that State. For instance, in the twenty-year period from 1904 to 1923 there was an increase in the number of patients in the state hospitals of that State of 42 per cent. In a generation one person out of every 25 in that State became a state hospital patient, and one family out of every seven families has a representative in a state hospital. The average age of

the first admission to the state hospitals is 40 years. An inference from that fact is that the mental break is most apt to come at that period of life when stress and strain is greatest. Less than 4 per cent of first admissions are under twenty years of age. The unnaturalized foreigners who become insane, and are for one reason and another not deported, cost the State of New York more than \$5,000,000 annually. Dr. Haviland thinks the great need is for more physicians and nurses trained especially in the care of the insane. Skilled workers in the domain of psychiatry are too few. The tendency is to erect more buildings, to provide more hospital beds, without correspondingly increasing the medical and the nursing staff.

Dr. George H. Kirby related his experience with the treatment of paresis by malaria. In such therapy the parietic patient is inoculated with malaria by a transfer of blood from a malarial patient to the parietic. Of 106 of Kirby's parietic patients under such treatment 36 got well enough to go back to their work. Kirby thinks that those patients exhibiting marked improvement tend to hold the improvement. In these patients no antisyphilitic treatment at all was used.

The annual address is always one of the outstanding features of the Association's meeting. It is always delivered by an invited guest. Last year the address in Richmond was made by Clarence Darrow, who talked about crime. At the recent meeting in New York the address was given by Dr. George E. Vincent, the president of the Rockefeller Foundation. He is the most vocal human being I have ever seen or heard. He deluges an audience with an unbroken stream of words. One gets the impression, in listening to him, that the words are all pent up in him under great pressure and that they are knocking and clamoring for release. And one gets the notion, too, that if he had his way—that is, if the Rockefeller Foundation had its way—only the super-fit would be educated. The dullards and the poke-easies would be left as hewers of wood and drawers of water. Eventually, of course, that Foundation may control entirely medical education in the United States, while academic education may be attended to by the Carnegie Foundation.

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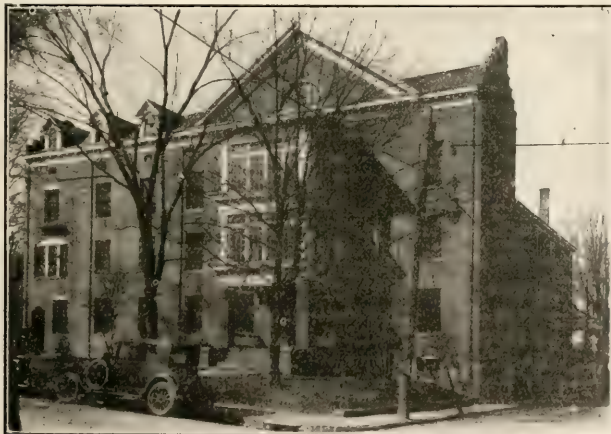
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O. L. MILLER, M.D., *Editor*
Charlotte

HOSPITAL ASSOCIATION MEETING

On Thursday, June 10, there convened at Wrightsville Beach the ninth annual conference of the Hospital Association of North Carolina. This important gathering just preceded the regular State Medical Society meeting and many attending spent approximately a week at this popular resort in the broad interest of hospital and medical service in North Carolina.

Dr. Thomas Jordan, of Raleigh, president of the association, presided, and was succeeded in this office for the coming year by Dr. J. R. Alexander, of Charlotte. A number of out-of-the-state guests were on the program and contributed in turn some very able addresses on pertinent subjects. Miss Adda Eldridge, president of the American Nursing Association, read a paper on nurses and their relation to hospitals generally and made appeal in the interest of higher standards to be instituted or continued in all our hospitals, as they relate to nurses. The leading speaker for one evening was Dr. Bert W. Caldwell, superintendent Gordon Keller Memorial Hospital, Tampa, Fla. Dr. Keller has had broad experience with both civil and military hospitals and his address on "Why Hospitals Fail" covered about all the ground in the interest of the problem as it concerns the patients, doctors and institution.

Other guests from nearer home, and who contributed to and enlivened the program, were our South Carolina co-workers. Dr. J. M. Beeler, superintendent Spartanburg General Hospital, discussed the subject of clinics for indigent patients. Mr. David Gibson, superintendent Columbia General Hospital, dealt with the subject of hospital administration. Mr. W. M. Whitesides, of the South Carolina Baptist Hospital, Columbia, was on the program in the interest of nursing education.

Mr. W. H. Sprunt, of the Board of Directors of the James Walker Memorial Hospital, Wilmington, conducted a very interesting Round Table one morning on a variety of subjects: "Auxiliaries," "Financial Assistance," "Hospitalizing the Colored Race." Mr.

Sprunt reflected a high type of lay interest and understanding in the somewhat technical subject of hospital service, its relation to the community and the community to it. The James Walker Memorial Hospital gave a good account of itself, both in the evidence of its standards and in its hospitality to the convention. Mr. Newton Fisher, the superintendent, was elected secretary of the association for the coming year.

The concluding session was a symposium on the subject of "The Workmen's Compensation Act," led by Mr. John M. Smith, director Hahneman Hospital, Philadelphia. It is evident that legislation in connection with a workmen's compensation act will soon be at the bar in this State, one of the remaining four in the nation not having some type of industrial legislation already. Mr. Smith was quite conversant with the subject from every angle and urged that all concerned in the State get together, that a law be enacted with, as near as possible, all the virtues of similar laws in other States and none of their faults. The operation of a workmen's compensation law will have a distinct effect on hospitals, industrial workers and doctors. The subject created much interest and evoked free discussion.

There is a fine field of usefulness for this State hospital association if the people behind hospitals come out and air their wants and experiences for mutual benefit.

The next meeting place will be Charlotte and it is hoped to have the sessions somewhat in conjunction with the sessions of the district meeting of the American College of Surgeons. A movement is on foot, and it sounds constructive, to merge the North and South Carolina Hospital Associations into one larger unit. To encourage this is the fact that the American College of Surgeons is restricted locally into the two States, the Duke endowment operates somewhat similarly in the two States, and lastly it is considered good for "bretheren" (and "sisterin") to dwell together in unity.

One very interesting feature of the Wrightsville Beach program was forgone on account of the unfortunate accident to Dr. W. S. Rankin while en route to the meeting. The only compensation for this disappointment was the fact that Dr. Rankin's injuries proved to be not of a dangerous nature.

Dr. Alexander, who is president of the

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association for the ensuing year, well deserves this recognition. His services to the association as secretary for the past five years have been very constructive.

UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*
Charlotte

THE DIAGNOSIS AND MANAGEMENT OF PENILE SORES

Continued and persistent carelessness on the part of some of the profession in the diagnosis of genital sores, has prompted the writer to review what he considers some of the more important phases of this subject.

I especially want to urge that genital sores be looked upon with suspicion until they are proven non-syphilitic. Bacteriological examination of the sore should be made and repeated at one or two day intervals *before any form of treatment is applied to the sore*, except simple cleansing agents, such as physiologic salt solution or a solution of boric acid. The practice of cauterizing a sore on the genital organs or of applying a strong antiseptic solution to the same, before the lesion is persistently studied over a period of at least a week and a diagnosis is finally made, cannot be too strongly condemned. The attitude of doctors disposed to "take a chance" or to quickly heal a genital lesion to satisfy the patient, is probably the greatest retarding factor in the early diagnosis of syphilis.

The only safe way to diagnose a genital sore is to look at it, know what you are looking for, feel it, study it clinically from a few days to a week, obtaining the opinion of a competent bacteriologist at intervals of every few days. One negative laboratory report of a suspicious sore on the genital organs is not sufficient to exclude syphilis, and I would like to say to the profession over and over again, the repeated studies without treatment, both clinically and bacteriologically, is the only way to solve the problem.

The lesions frequently seen on the penis and genital organs are as follows:

- 1st—Chancres
- 2nd—Chancroids
- 3rd—Mixed sores
- 4th—Ulcerative balanitis

- 5th—Ulcerated lesions of scabies
- 6th—Ulcerated herpes genitalis
- 7th—Lesions due to lichen planus.

Four outstanding points have been handed down to us as necessary for the clinical diagnosis of the primary lesion of syphilis. They are as follows:

- 1st—The sore must be single
- 2nd—It must be indurated
- 3rd—It should appear four to six weeks after exposure
- 4th—The inguinal lymphatic glands must be both enlarged and hard.

Either one or all of these outstanding clinical points may be absent and the sore in question still be a primary chancre.

It occurs to me that the practical way to consider sores on the genital organs is to constantly keep in mind the common genital lesions which I have mentioned in this article. Know the clinical appearance and characteristics of each lesion and always be on the alert for the primary lesion of syphilis (either typical or atypical, simple or mixed). Nothing will prove so misleading as to try to diagnose primary syphilis from the history. If physicians would spend more time in familiarizing themselves with the clinical aspect of venereal sores, we would have more primary syphilis to treat before the condition becomes generalized and so destructive.

I have said very little in this article about the other common penile lesions; for example, *ulcus molle* or herpes of the genitalia. I have tried to emphasize the all important point, to treat all genital lesions with suspicion until you can honestly and conscientiously prove them otherwise. If the doctor who often sees the so-called venereal sore will stop, look and take time to study, when consulted about some apparently innocent looking genital sore, more people will escape generalized syphilis and other destructive lesions of the genital organs.

The local treatment of genital sores is, as a rule, simple and effective, if the following points are put into practice:

- 1st—Thorough study
- 2nd—Cleanliness, with mild solutions as, hot physiologic salt solution or hot boric acid solution.
- 3rd—Application of the proper drug in the proper way at the proper time.

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W. M. ROBEY, D.D.S., *Editor*
Charlotte

WHEN A TOOTH IS AN OFFENDER

The decision as to when to extract or not to extract a tooth is easily made, provided the welfare of the patient is not considered.

But assuming that the teeth are of vital importance to the patient, that the profession of dentistry is due to his need, the nearest approach to basing our decision upon scientific reasoning should be our aim.

Therefore to extract a tooth to avoid the possibility of future trouble from that source is laying down a rule that would have but one end in surgery.

When in doubt, extract; is a rule subject to much abuse due to ignorance, laziness and cupidity.

To extract because someone else directs; is mere mechanics.

We should have a reason for considering an extraction; pain, local or reflex; a local lesion, with or without pain; an organic lesion; malocclusion of the teeth; mechanical reasons; the wish of the patient; as a prophylactic measure; or a combination of two or more of these.

The general physical condition of the patient should receive our attention, the age, sex, occupation, condition of heart, kidneys, circulation, history, etc. The thoroughness of such a survey must depend necessarily upon the wish of the patient and severity of the suspected lesion, which may range from a small pit cavity to a combination of organic troubles. By far the greater number of dental examinations are devoted to the discovery of unobscure dental lesions, and require slight general observation. At the same time many cases are referred by physicians and many should be referred to physicians, and for the patient's sake, cooperation should be cordial, as incompetence in the other's sphere, is shared equally.

After the general survey, including such information and history that the patient may give, a most thorough local examination must be given using any device or instrument at the dentist's command. The small explorer, percussion, heat, pulp testers, x-ray,—all have an equal value and one or all may be used to arrive at a correct diagnosis.

The two predominating influences in the treatment of teeth are the severity of the lesion and the condition of the patient.

The chance for a favorable prognosis varies inversely as the condition of the patient to normal is to the severity of the lesion. In other words a young adult with a good history, physically normal, and living normally can take greater chances than one subnormal physically, with an unfavorable history, and living abnormally or with the overload of age.

Many constitutional symptoms of disease point to some focus of infection. Unfortunately there may be (32) thirty-two teeth to be held under suspicion. It is therefore proper in obscure cases to eliminate doubt as to these thirty-two possible sources, first. A definite local lesion should be eliminated either by treatment or extraction. Treatment may be attempted in a normal individual, with slight symptoms, who is so situated as to be subjected to observation. Even exacerbated systemic symptoms in this type may subside after successful local treatment.

But in the physically subnormal individual young or old, even slight constitutional and doubtful local symptoms should be seriously considered. Definite acute constitutional and local symptoms in this type individual, do not usually permit the taking a chance; extract. A chronic lesion in any part of the body does not yield readily to treatment. A chronic abscess of long standing is no exception, is inaccessible, and therefore the prognosis is unfavorable.

Pyorrhea is chronic but accessible and unless there has been an extensive loss of the alveolar process so as to cause a loosening of the teeth the prognosis is more favorable.

The retention of a tooth or teeth for mechanical reasons, at times may be of such value as to justify taking a chance under unfavorable circumstances. Financial reasons should not weigh against the patient's health.

A tooth that is a chronic source of irritation to the cheek, lip, tongue or throat should be extracted.

Regardless of the tents of our orthodontists, in certain cases of irregularity of the teeth, extraction will improve the irregularity and the appearance of the patient, and should be resorted to without hesitation.

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DERMATOLOGY

JOSEPH A. ELLIOTT, M.D., *Editor*
Charlotte

Sodium thiosulphate has been used for many years as a chemical of great commercial value in photography, but only within the past few years has it gained a reputation as a therapeutic agent.

Ravaut found this chemical to be of value in the treatment of exfoliative dermatitis caused by arsphenamin or its derivatives. Ravaut's observations were confirmed by McBride and Dennie of this country, who made a careful study of the drug. Following the publication of their results, the drug rapidly gained favor with syphilologists all over this country. Any drug that would be of benefit in that type of case, which had previously persisted for weeks or months, in spite of all other forms of treatment, was gladly welcomed. After a fair trial, many American physicians have reported good results from its use and favorable reports are now coming from various parts of Europe.

It was found that sodium thiosulphate not only exerted a beneficial effect in arsenical intoxications, but proved of definite value in both lead, mismuth and mercury poisoning. It is now being generally used in these conditions with gratifying results. The results are most satisfactory when given early in the intoxication, and it is therefore advisable to administer the drug as soon as possible in severe cases of poisoning.

The reason for the beneficial results of sodium thiosulphate in these conditions is not known. It is thought, however, that the sulphur changes the metals into less soluble and less toxic sulphides. The work of Kahn and Loevenhart indicates that sodium thiosulphate does not increase the excretion of the drugs, but transforms them into less toxic, less therapeutically efficient, and less easily excretable products.

We have had occasion to treat a few cases of arsphenamin exfoliative dermatitis. Two cases were seen within a few days after the eruption appeared and were given 0.5 gm. of sodium thiosulphate in 5 c.c. of water, in-

travenously, each day for three days. At the expiration of this time the eruption had entirely disappeared. A third case was seen after the dermatitis was well established. Treatment was pushed more vigorously but the condition persisted for several weeks. While the eruption in the latter case did not respond readily to sodium thiosulphate, we feel that its duration was materially reduced.

McBride has reported a cure of a case of arsphenamin encephalitis with sodium thiosulphate. The author feels that it should be used in large doses in such cases and at the earliest possible moment. We have had the opportunity of treating only one such case which proved fatal. The patient was in extremis when first seen and the drug was given with only a faint hope of results.

Both cases of bismuth and mercurial stomatitis have been treated by the administration of sodium thiosulphate and the results have been far superior to those obtained by any other method of treatment which we have employed.

This drug is used to advantage in cases where large quantities of mercury have been taken by mouth. The usual method of washing the stomach, etc., should be carried out and sodium thiosulphate be used as an adjunct by intravenous and oral administration.

EAR, EYE, NOSE AND THROAT

C. N. PEELER, M.D., *Editor*
Charlotte

DIFFERENTIAL DIAGNOSIS BETWEEN PNEUMONIA AND ORGANIC FOREIGN BODY OF THE LUNG

Having had a number of foreign body cases resembling cases of pneumonia, it might be of interest to discuss this briefly.

In making a diagnosis of pneumonia, the possibility of a foreign body must be excluded. In practically every case of foreign body of the lung a history of choking on something—a piece of peanut, chestnut, bean, pea, for instance, can be obtained. Getting such information is a very important point in making the diagnosis. The wheezy cough must be considered; the asthmatic wheeze is characteristic. If the intruder is a peanut, in three or four hours the temperature may reach 104. The younger the child the higher the temperature.

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If examined early, i. e., in the first day or two, the affected portion of the lung will be hyperresonant, few or no rales will be heard. Trapped air fills that portion of the lung. If the foreign body is located in a main stem bronchus, the heart and mediastinal structures are pushed toward the opposite side and the diaphragm downward. After the first day or two the air is gradually replaced by secretions and then we have a "drowned lung." Here we have practically the same symptoms as consolidation. In this condition the child runs a septic temperature. There may be as many as three attacks of high temperature with remissions in one week. The temperature may drop to normal without showing any resolution of the lung, whatever.

From the "drowned lung" condition an abscess of the organ begins to form, gradually increasing in size so long as the foreign body remains.

The cardinal signs, as seen in an x-ray picture, are mediastinal structures pushed towards the opposite side, the diaphragm downward, the intercostal spaces increased and lung filled with air or secretions according to time.

INTERNAL MEDICINE

PAUL H. RINGER, A.B., M.D., *Editor*
Asheville

IODIZED OIL IN DIAGNOSIS AND TREATMENT OF BRONCHIAL AND BRONCHOPULMONARY CONDITIONS

Two interesting papers have recently appeared on this subject, one, by Pritchard, Whyte & Gordon, of Battle Creek, and one by Iglauer of Cincinnati. Both papers appeared in the *Journal A. M. A.*, the first April 10, 1926, and the last June 19, 1926.

Diagnosis and treatment both lie within the province of iodized oil, which was first used in 1922 by Sicard and Forestier. It is the chemical compound of 40 per cent metallic iodine with oil of poppy seeds. Because of its high iodine content it is opaque to the roentgen ray, wherein lies one of its most valuable properties in diagnosis. Its therapeutic value is in large part due to the slow rate of absorption of the contained iodine without any harmful effect upon the patient.

Pritchard and his co-workers summarize

four methods of introducing iodized oil into the bronchial tree. These are:

1. *Supraglottic*: In which, after anesthesia of the pharynx and the larynx, 20 c.c. of warm iodized oil in a syringe to which is attached a 6 inch canula, with the tip curved at a right angle, is gently and slowly expelled into the larynx by aid of the laryngeal mirror.

2. *Transglottic*: The same as the preceding save that more complete laryngeal anesthesia is required and that the tip of the canula is introduced past the glottis into the trachea.

3. *Subglottic*: The introduction of a curved needle into the trachea through the cricothyroid membrane, slight preliminary tracheal anesthesia, and subsequent injection of the oil directly into the trachea.

4. *Bronchoscopic*: The injection of the iodized oil through the previously introduced bronchoscope.

As the oil is heavy and follows the direction of gravity, its ultimate lodgment can be controlled by changing the position of the patient. Lower lobe bronchial trees are obviously more easy to inject than are upper lobe trees. In the former the patient is injected sitting upright and inclined slightly toward the side which it is desired to inject; in the latter the injection is made with the patient lying down, and very shortly after injection the head and chest are lowered so that the oil will gravitate into the upper lobe bronchial tree.

The oil, being wholly resistant to the x-ray, outlines very well conditions throughout the bronchial tree. The technic of injection is not difficult, particularly if the supraglottic route is used.

Dyspnea is sometimes present after injection. Severe dyspnea and cyanosis have been observed in patients with myocardial insufficiency. Ordinarily, when dyspnea occurs it is probably due to the mechanical effect of the oil combined with susceptibility to cocaine.

A slight febrile reaction frequently follows the introduction of the oil and lasts usually a day or two.

Injection of the oil is contraindicated in febrile or cachectic patients and in those with cardiac decompensation.

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genograms taken promptly subsequent to an injection of iodized oil:

Distortion, obstruction or displacement of the trachea and main bronchi is delineated with much greater clearness than in ordinary roentgenograms.

Bronchiectatic cavities stand out as club-shaped, grape-like, or fusiform swellings along the course of the bronchial tree.

Lung abscess may be demonstrable or not. If the abscess cavity is filled with secretion and has a very narrow connection with the bronchus, it can not become filled with the oil. If the abscess cavity has a free bronchial communication, it will fill with oil and be well outlined.

Some authors have hesitated to inject oil into tuberculous cavities, but Archibald and Ballou have done so with no bad results whatever. Unsuspected cavities may be disclosed. Archibald has found the method of value in establishing indications for thoracoplasty and in studying the progress of cases after operation.

Moeller and Von Magnus injected the outlet of an empyema fistula and found that the oil had entered a bronchus, thus demonstrating the presence of a broncho-pneumo-pleural fistula. The fistula, which had shown very little tendency to heal, closed within three weeks after the treatment.

"Injection of the lung aids in the differential diagnosis between tumor and abscess. In tumors of the pleura or lung parenchyma, the injected bronchi either terminate at the site of the tumor or seem to be pushed aside by the growing neoplasm."

Pritchard and his associates give histories of three cases of bronchiectasis, definitely diagnosed by oil injection, and treated by injections of 10 c.c. of oil weekly for six weeks, by 14 injections of 12 c.c. every five days, and by 16 injections of 10 c.c. in eleven weeks, respectively, with very marked improvement in all symptoms, subsidence of cough, practical disappearance of sputum, etc. Iglauer cites a case in which, after oil injection tubercle bacilli were found in the sputum, which had previously been negative on many examinations.

It is difficult to give an adequate idea of the interest and scope of this subject unless one is able to reproduce some of the very excellent roentgenograms that accompany the papers cited. The procedure is one that bids fair to open a new method of treatment in non-tuberculous chronic chest infections. The method seems practically free from danger, and as a diagnostic and therapeutic measure should receive more attention than has hitherto been given it.



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REVIEW OF RECENT BOOKS

AMERICAN MEDICAL AND SANITARY RELIEF IN THE RUSSIAN FAMINE, 1921-1923, by Henry Beeuwkes, M.D., Medical Director American Relief Administration, Russian Unit. American Relief Administration, Herbert Hoover, Chairman, 42 Broadway, New York City.

This is a tale of horrors, illustrated in a way to truthfully portray these horrors, such as everyday citizens rarely dream of. In our smug complacency we rarely fail to bear out the idea of "If his own front door be closed, he'll swear the whole world's warm."

Of course, it is easy for most to dismiss anything and everything bearing on Russia as concerning only bolsheviks, socialists, atheists, pagans, foreigners, infidels or agnostics,—terms used as synonyms, and each in the idea that a great gulf is being thereby set between themselves and this miscellaneous horde of outcasts.

But when we have, from entirely authentic sources, the description of wholesale starvation, in many instances bringing its victims to the point of murdering and eating their fellow-creatures, with photographs of these cannibals by necessity, surprised at their feast and with hunks of human flesh under their arms, we can hardly fail to be impressed.

The manner in which the American Relief Administration conducted this work, expending the nearly \$60,000,000 appropriated by Americans (\$20,000,000 being voted by Congress) in feeding and giving medical succor to millions of the sick and starving is a story of heroic endeavor told in a modest way.

It shames us and makes us proud. The shame comes from the realization that in this age of boasted progress and in a "Christian" country such conditions could have come about; the pride lies in the will and capacity to render aid on such a scale and in such a spirit.

The humanitarian aspect of the work appeals to the doctor certainly as strongly as to any other man, and he will have a special interest in the graphic descriptions of disease as influenced by the lack of food and means of keeping up practices in hygiene which have come to be so common as to be taken for granted.

EDGAR'S PRACTICE OF OBSTETRICS.

For Students and Practitioners of Medicine, by J. Clifton Edgar, Emeritus Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College; Consulting Obstetrician to Bellevue Hospital, New York City; Surgeon to the Manhattan Maternity and Dispensary; Consulting Obstetrician to the New York Maternity and Jewish Maternity Hospitals, Revised by Norris W. Vaux, Clinical Professor of Obstetrics in the Jefferson Medical College, and to the Jefferson Hospital, Philadelphia, etc. Sixth Edition, Illustrated. P. Blakiston's Son & Co., Philadelphia.

Dr. Edgar, having ceased to teach Obstetrics, has wisely and considerably turned over to another the work of preparing a new edition. This should result in improvement, for, however good a book may be, it has defects evident to the eye of one having an intimate acquaintance with the subject, and having no personal interest in the verdict.

The practice in former editions of omitting matter properly to be found in every textbook of Anatomy is continued. Many sections are entirely re-written, much new matter is added; yet this edition is comparatively small.

Being written with a view to meeting the needs of students and practitioners, it is definite and concise. The illustrations really illustrate the text and add greatly to its teaching value.

Finally, there are enough typographical errors (which in no way confuse or mislead) to please any editor who is being constantly blamed for letting them get by.

TEXT-BOOK OF MATERIA MEDICA FOR NURSES Compiled by Lavinia L. Dock, R.N., and Jennie C. Quimby, R.N. Eighth Edition. Illustrated. \$2.25. New York and London, G. P. Putnam's Sons, 1926.

Very wisely the authors devote much space to definitions and methods, poisons and antidotes. It seems that they have clearly in mind the idea that nurses' and doctors' duties are complementary and not overlapping.

No attempt is made to give exhaustive information on any remedial agent; only enough is said to gratify natural curiosity as to what is being used, to guard against over-

APPENDIX TO PHYSICIANS' DIRECTORY

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dose, and to render first aid in case of poisoning.

COLLECTED PAPERS BY THE STAFF OF THE HENRY FORD HOSPITAL (First Series 1915-1925), with 151 Illustrations and 42 Charts, \$8.00. Paul B. Hoeber, Inc., New York, 1926.

The editor is indeed glad to have a copy of the "first series" of collected papers of Mr. Ford's hospital. For his present purpose the manner of conducting the institution does not matter; the real concern is the quality of work which is being done and how it may influence progress in preventing disease and curing diseased persons.

The "foreword" introduces many of Medicine's historic personages, recounts many of their exploits, and relates many of their observations,—with philosophic deductions therefrom.

It is hazardous to discriminate, but we will venture to say that the articles on blood phosphates, tannic acid in burns, ligamentous calcification in lower back pain, the history of transfusion of blood, diagnostic criteria of duodenal ulcer, metabolic disturbances in the eclamptic state, and efforts toward simplification of obstetric care, have especial interest and value.

It is well to have assembled records of work done by thoroughly trained men under such unusual circumstances as obtain in the Henry Ford Hospital. Some features may be regarded as in the experimental stage. The evolution of the plan on which this institution is founded will be followed with the greatest interest, and the collected papers will record much of this story.

NEWS ITEMS.

DR. I. W. FAISON's death was announced as the journal was going to press. Accounts of exercises in his honor will be given in the next issue.

DR. CHARLES L. MINOR, of Asheville, was one of the five distinguished citizens of North Carolina, on whom, as a part of its 131st commencement exercises, the University bestowed an honorary degree. Dr. Minor was made a Doctor of Laws in recognition of his

work in tuberculosis which has brought him world-wide fame.

DR. DOUGLAS VANDER HOOFF and Mrs. Selden Habliston, both of Richmond, Virginia, were married in New York City on June 22nd. The honeymoon is being spent in Switzerland.

DR. VINCENT ARCHER, son of Dr. I. J. Archer, of Black Mountain, was recently made Professor of Roentgenology in the Medical School of the University of Virginia. This honor is especially distinguished coming to a man of twenty-eight from an old and conservative institution of learning, through the unanimous choice of the Faculty and Board of Governors.

DR. H. J. WALKER, the oldest citizen of Mecklenburg County, for eight years county treasurer, and for more than three decades an active practitioner of Huntersville, celebrated his 90th birthday, June 24th. As Lieutenant Walker he lost a leg in the Gettysburg campaign, and (what is believed to be a happening without parallel) his brother lost the same leg in the same series of battles. Both brothers are in quite vigorous health, but the doctor has suffered the misfortune to practically lose his sight.

DR. E. STOKES HAMILTON was elected president of the Charlotte Dental Society at a meeting held by the members June 17 at Rozzelle's Ferry.

Other officers elected were Dr. Ralph Jarrett, vice-president; Dr. Wallace Abernethy, secretary, and Dr. Burke Fox, treasurer.

DR. S. B. BIVENS, the retiring president, briefly reviewed the work of the society during the past year, particularly commenting on the fact that the society had entertained the district society, had organized a study club for research into dental problems, and had inaugurated a movement to establish a dental library.

DR. MORRIS LEVINE, of Brooklyn, has been recently promoted to the position of Associate Professor of Otology in the New York Post-Graduate Medical School and Hospital,

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No. 8

A NEW TASK FOR LAW

W. M. HENDREN, Winston-Salem

Presidential Address before the Twenty-eighth Annual Meeting North Carolina Bar Association

My thesis is that war be made subject to law—in short, that war be declared a crime. Law is here viewed as a human institution developing in history, beginning in savagery through the endeavor to secure peace, and expanding in the highest civilization into the effort to establish justice. Law is not a chance product, but is the result “of an infinitely reasonable impulse of humanity, a sociological process pushed forward by necessity through the co-existence of reasonable beings with material and spiritual wants, and which therefore, like every evolutionary process which expresses reason has its own principles and eternal laws.”

It goes without saying that what is said in this address is the result of my study of what others have thought and said. Many of the conclusions are common in their statement to several writers and hence have been stated without acknowledgment even when the language of one of them has been borrowed.

I justify the choice of this subject on this occasion and before this audience because I hope to show, superficially it is true, how law has developed, and more particularly its capacity for service to mankind at all stages of its development. In any event, it speaks my hearty and homage to “Our Lady of the Law,” one of those ministers I have the honor to

* * * * *

To some, may be to most folks, discussion of questions like the one in hand seems so futile as not to be worth while, for whatever may be said is characterized as being counsels of perfection, which have no place in practical affairs of life. This is to say that mankind is incapable of learning by experience. To

assume that civilized man has learnt nothing from the last war, the most tremendous experience in his history, except to prepare for another is to declare that he has ceased to progress and hence is preparing for decay. “Learn or perish” is the rule for nations as for individuals.

The supreme need of civilized mankind is to arrive at an agreement that in disputes between nations war must be ruled out as a means of settlement; that between nations, as between individuals, the risk involved in settlement by law and arbitration is preferable to the disaster of force.

A glance at the history of legal institutions reveals ground for the suggestion that law is equal to its new task, for in the history of mankind the function of law is to supersede war. The condition of all law in primitive communities resembles that of international law at the present date. The glimpses that we have into the earliest state of races of men that are now civilized, show a state in which war, war between individuals, or rather between families, was the general rule; and law, in its beginning, was striving to mitigate the ferocity and scope of war by the gradual introduction of voluntary arbitration as an alternative or substitute for violence.

“A system of self-redress, in the form of private vengeance, preceded everywhere the establishment of a regular judicature.” At this stage of human progress, law, in any sense in which we use the term, cannot be said to have existed. Yet out of this system of retaliation has come our system of criminal law. The first stage in this development was the growth of a custom for the injured person to accept some pecuniary satisfaction in

lieu of his right of vengeance. This was, at first, a purely voluntary matter on both sides. It was altogether a matter of private bargaining. But custom has enormous force among men, especially the uncivilized, and so gradually a regular scale of payment emerged. Still there was no compulsion—no constraint whatsoever—and no intervention of any judicial authority. The first germ of any judicial proceeding is to be found in the settlement of the amount of these fines by the tribal assembly, which among even the most primitive peoples was held periodically.

However it may be conceived, the idea of sovereignty supplies no obstacle to the notion of bringing nations under law. From one point of view the history of international relations is the history of a gradual, progressive limitation upon the freedom of action of independent states.

The right of personal revenge to the primitive man is of the same dignity and as deep rooted as the present day idea of sovereignty. A man was bound by all the force of religion and custom to avenge the death of his kinsman. It was a sacred and highly duty imposed upon the nearest male relative—the avenger of blood, as he is called in the Scripture accounts. Yet it came to pass as law grew and developed, that murder, like any other offense, could be compounded for between the wrongdoer and the nearest relative of the slain. A high and imperative prerogative was surrendered.

The death fine is referred to by Homer. In the Ninth Book of the Iliad, Ajax, in reproaching Achilles for not accepting the offer of reparation made to him by Agamemnon, reminds him that even a brother's death may be appeased by a pecuniary fine, and that the murderer, having paid the fine, may remain at home among his own people. Among the ancient Germans the custom prevailed universally. Tacitus tells us that atonement was made for homicide by a certain number of cattle, and by that means the whole family was appeased. The early English laws were based on the same principle; the fine for homicide is constantly referred to in the laws of Edgar and Athelstane. In Roman law there is no trace of it, probably because the life of a Roman citizen was deemed too sacred to be condoned for by money payment. Certainly this is true of the

Mosaic Jews, for by that law the acceptance of a death penalty was distinctly forbidden.

"With law shall our land be built up and settled, and with lawlessness wasted and despoiled." These are the words of an Icelandic law giver of the tenth century. In those days as in these, the problem was to put an end to fighting; only now the field is the whole world and the fighting between nations.

With private warfare everywhere prevalent, the desire of every wise man among that primitive people was not so much that he or his neighbor should get his rights as that the land should not be despoiled. Out of this desire, having its genesis in popular demand and need, law courts were established; in the beginning of doubtful powers, but the fructifying ground of popular demand yielded its fruit with more law, more courts and stronger ones; gradually private warfare ceased and the land was built up.

What is true of Iceland is true of every other civilized country; a similar evolution can be discerned in the history of these countries, and if civilization is to abide with us that process must be applied to nations.

We can no longer delude ourselves with the notion of war becoming impossible because the machines of destruction have become so terrible as to mean extermination. The utter fallacy of that notion is exposed nowhere more surely or trenchantly than in the words of Walter Hines Page, that son of Carolina of whom Britian has declared for the centuries to read, that he was her friend in "Her Sorest Need." Writing in August, 1915, to President Wilson, he says: "Starvation and the use of gas will become conventionalized in future wars, whether 'legalized' or not. In fact, they are already accepted weapons of this war. The mistake made by those who predicted that the horrors of war with new engines would make war impossible was not a mistake about annihilation but about the shrinking of men from being annihilated. No such fear stops them. In fact, it looks as if war now means practical extermination. * * * * * Men were once horrified by the use of the cross-bow in war, and by the use of guns—all of the old rules of sword and pike were knocked out by these dishonorable new weapons of indiscriminate destruction. So the art of killing moves on towards a gas that will annihilate an army

or devastate a province."

Is it to imagine a vain thing to maintain that the tested principles of ethical conduct which have force with individual persons should also have application to the conduct of national persons? In the last analysis force gives protection to no one—great or small. Law, and law alone, gives security. Opinion, that all controlling force of things human, crystallizes into the forms of law and speaks through those forms for the guidance and regulation of those who submit themselves to the rule of law. Those who do not so submit themselves, be they individuals or nations, are the world's criminals.

So long as war finds a place in the category of rights, while it has behind it the appeal of lawfulness, there is not the slightest hope or chance of the moral nature of civilized man functioning in international relations. This situation, quite apart from the horrors and wastefulness of war, makes it imperative that war be outlawed.

Why is it men's morals have so little effect in regulating the attitude of nations one to another?

An enormous amount of idealistic propaganda comes from pulpit, platform and press. The whole world is humming and roaring with idealism of one kind and another. Quantitatively speaking, the Kingdom of Heaven cannot be far off. Why does all this idealistic propaganda have so little effect on the actual conduct of nations? Why does the greater part of it, well-nigh all of it, go in at one ear of the world and out of the other? Lest we are to throw up our hands in despair and admit the defeat of mankind as the victim of circumstance, we must assume there is a reason.

It will not do to say that men are not in earnest about these things. They are tremendously in earnest.

Nor will it do to say that moral sense and moral impulse have fled the world. The most cynical and despairing man will hardly declare that in their ordinary affairs the moral purposes and conceptions of the average decent man and woman are not far removed from the existing reign of hatred, suspicion, fear and secrecy in national affairs.

Why are the morals that are employed in everyday matters paralyzed when it comes

to international conduct? Why are they rendered impotent?

There is a reason and it is high time mankind is recognizing that reason and beginning intelligent action in the light of that knowledge.

For our first statement of the basis of international relations we go to Grotius, and there we find that international relations are bottomed on the law of nature which to Grotius had a theological background and a religious force.

Now, I apprehend we will all agree that this original conception no longer exists. When, then, and how was it lost? In the shift by which divine love and desire for man replaced the concept of divine commands, injunctions and prohibitions, men got out of the habit of associating the religious factor in morals with laws of nature, and to a large extent, with law at all. There was thus lost as a factor in international relations the moral concept underlying the law of nature. And this decay has not been replaced with any other moral principle of equal generality and equally wide current acceptance.

The moral principle is just as essential to national life as it is to individual life. The absence of a moral principle brings the same results everywhere. The pursuit of secular well-being, without any spiritual ideals, has been tried by mankind many times in many ages, and always with the same result—death and disaster.

The World War was an inevitable result of a secularized civilization—a civilization in which material forces had gotten ahead of moral forces. A moral principle must, therefore, exist in international affairs.

As matters now stand, such principle is to be supplied. It can be supplied by making war a crime and erecting a World Court to enforce that article of the Code of Nations.

We now know that the World War was not the special crime of any group of individuals or of any one nation. Europe drifted into that war, because of lack of leadership among nations whose natural resources had outgrown their spiritual control. Europe was mounted on a bigger horse than she knew how to ride.

"The future, the life of European civilization," writes Lord Grey, "will depend upon whether a wiser and more instructed spirit

prevails now than it did before the experience of the Great War; if it does not, our present civilization will perish, as others have done before. * * * * If, however, such a spirit does exist, then some things that have hitherto been unattainable aspirations may, and indeed will, be accomplished."

Without this observation, the truth of which must be assumed, as a background I would not have the temerity to seriously discuss the outlawry of war. But with this background, and my knowledge of how law has heretofore served mankind in the realm of morals, I venture to give my adherence to the proposition that war be made a crime.

To bring forth a legal institution requires an enormous effort on the part of mankind. I enlarge upon this thought with the words of Kohler: "To achieve the institution of marriage in the modern sense, or the parental relationship, or the law of contract, and to attain a State which looks after all interests, required an enormous outlay of human energies, involving not alone individuals but peoples; thousands of young lives were blighted, thousands of hearts were broken, and streams of blood flowed to enable a fruitful new idea to come into existence; just as it required the powerful expenditure of all the forces of nature to raise up our organic world out of its original imperfection."

In one sense then the real inquiry is whether mankind has yet paid the price which must be rendered before there can be granted to it the institution of international peace. *There is no more reason or justification for a world of lawless nations than for a nation of lawless individuals.* What the law has done to rid nations of lawless individuals it can do to rid the world of lawless nations. No more than this will be claimed for it. No more can fairly be expected of it.

It is very difficult for us to conceive of murder as being recognized by law as a perfectly legal performance. Yet international law—that body of rules and regulations and prohibitions which operate upon nations in somewhat the same way as the municipal or private law operates upon the individual and community—accepts war as legal. Strange as it may sound, the only kind of war that is illegal is the very kind of war which to most persons appears from the moral standpoint justifiable—internal wars of liberation, such

as our Revolutionary War.

Until we make war a crime, there is small hope of moral progress among nations. How can the moral sentiments of the individual function in international affairs, when the chief collective sin of mankind—the sin of nations—is legal?

There is no reasonable doubt that the great majority of people of most civilized nations are strongly opposed to war, and the question inevitably arises, "How is it that nations composed of people who don't want war are continually fighting?"

The answer is that opinion against war is diffused, it is without a rallying point. There is no machinery to give that sentiment effect. Moral desires and moral sentiments are, I am constrained to believe, still widespread and deep rooted in mankind. What we need is a means of concentrating and directing these forces.

There is an institution—an ancient institution—which has proven its value for this purpose. "*Law* has always served the purpose of condensing and defining moral wishes and expectations of the community. It has served this purpose in case of private murder; why may it not serve equally well in public murder? However far below our highest aspirations law has fallen, still law has made effective the average moral sentiment of mankind. It has furnished a channel through which the moral emotions may flow to a purpose. Through law, these emotions are given leverage. It takes both the preacher and the policeman to keep us anywhere near the straight and narrow path.

War must be outlawed, and the accepted method of outlawing any practice is the appeal to law.

War is not only legal, it is the authorized and customary method of settling intense and major disputes between nations.

Nowhere else in life do we find such a gap between moral sentiment and accepted and authorized practice.

For lesser disputes we have designed methods of settlement which are alone legal. There are laws, courts and procedures for settling them.

No one will claim that causes of dispute between nations will cease any more than causes of dispute between individuals. But we do not allow individuals to settle disputes

by waging private war; even in cases where honor is impugned the duel is outlawed. It is not so much the fact of war as it is the *legality* of war that constitutes the greatest anomaly that now exists anywhere in morals. Moral sentiment finds itself in a self-contradictory position. There is a double standard of moral ideas leading on to an almost hopeless conflict, leaving the right thinking and patriotic man with no choice except between giving his support to war and a non-resistant pacifism which is all but ruinous to his self-respect.

Quite apart from the horrors and wastefulness of war, an end must be put to this fatal moral dualism.

There is a world-wide community of moral feeling. With war outlawed, there is provided a common center for the expression of this community of moral emotion and desire.

An international law against war will serve morals in the international realm as it has served morals in other departments of life.

It is the logical completion of the historic development of courts as the instrumentality for settling disputes, and until it is reached the influence of moral sentiment is split and scattered.

Laws have not prevented other crimes, but a slight knowledge of human nature and history convinces us that the existing legal sanction of war confers upon it a moral sanction which in the end encourages war. It is hard to kick against the pricks. It is well-nigh impossible to fight an institution which has legal sanction. Say what you please, what law authorizes is a powerful influence in determining moral ideas and aspirations in the mass of men.

So long as war is legal, as long as it is the recognized method of settling certain disputes, there is no opportunity for existing moral sentiments to function effectively in international relations, and next to no hope of the development of a coherent and generally accepted body of moral ideas for use in determining international questions. An essential and primary move in improving international morality is to outlaw war.

We are in thought and surroundings so far removed from the primitive that we have difficulty in recalling the day when courts of law functioned in a manner acceptable to the people, dealing with a multitude of cases,

with their power of compelling obedience well-nigh at the vanishing point. Power to compel parties to submit to its jurisdiction or to enforce acceptance of its decrees was not a *sine qua non* in many early legal systems. And in the days when such powers were deemed to exist they were not infrequently defied with success by evasion as well as by force of arms.

The original task of law was to prevent impending bloodshed. The device adopted was to start litigation in some form as a substitute, thus affording an opportunity to bring pressure to bear on the parties to agree. At this period of social development no more was attempted. The whole process, in the last analysis, had its root in voluntary action, first to forgo the blood-feud, and finally to come to an agreement with the adversary, either directly or through acceptance of the settlement proposed. The appeal was from the vindictiveness of man to his cupidity. Primitive law suggested payment in different kind. Instead of an eye for an eye and a tooth for a tooth, it suggested an ox for an eye and a sheep for a tooth. If the parties chose to accept this mode of settling their differences, the affair was at an end. But there was no compulsion on them to accept it. There was no authority to enforce compulsion. The pressure was that of public opinion. Long, long after authority was established and compulsion was become possible, the injured retained the right to reject the demand for compulsion and to proceed with the blood-feud.

If the power to prevent resort to violence in the beginning was weak, the ability to enforce decrees was even weaker. There was no sheriff, no police force. The earliest function of the courts was not to suppress the blood-feud, but gradually to supersede it by providing an alternative which would be acceptable.

The principal method by which the community acted was outlawry. In Iceland the declaration of outlawry ran thus:

"He ought to be made a guilty man, an outlaw not to be fed, not to be forwarded, not to be helped, or harbored in any need."

It is easy to see that the penalties denounced against the culprit are of the sort now called "economic."

There exists already the conception of a

society of nations. In any society there inheres a sense of obligation. Obligations import a duty of performance. For this performance there must be some security. The first security will be a pledge of the public faith. A breach of the faith so pledged will lead to suspension. Suspension from the society of nations would in practice involve international outlawry through economic pressure. It should and ordinarily would shut out the offending nation from intercourse with the rest of the world. It would terminate all correspondence whether personal or commercial. The mails would stop. Cables would be cut. Wireless telegraphy would be silenced. Imports and exports would cease. Should suspension and outlawry be found to be insufficient sanctions, then there may be considered the use of armed force as a policeman—to uphold and enforce law.

In Iceland this decree of outlawry appears to be the only means of enforcing obedience to the court. In much more highly organized states, after legal methods of enforcement were approved, powerful defendants ignored judgments with impunity.

The records of the court of the Star Chamber show that the repeated decrees of the courts were defied in parts of England as late as the end of the reign of Henry VII. Not for a long time could the courts prevent private warfare. In England and all over Europe, it persisted all through the middle ages. The law had to compromise with the deep-rooted custom of settling disputes with the sword. So trial by battle was adopted as a legal procedure. Duelling flourished more or less openly. Trial by battle was not legally abolished in England until 1819 and there is authority for the statement that it was practiced in the American Colonies.

In all probability, war between nations will likewise be repressed only gradually. International tribunals will not for a long time, if ever, be completely successful in preventing war. Yet that may not prevent their perfecting their purpose in ever increasing measure.

The world is now, in international matters, in a state of barbarism. Any international organization or plan that is set up will necessarily be imperfect and will fail to some extent to put an end to the reign of violence. It can hardly be more imperfect, however,

than were the beginnings of national organizations from which have developed civilized states. It has been characteristic of all vigorous races in their early days and in modern days, especially of the English speaking people, to go ahead with ill-constructed political machinery, without taking much heed to its defects, and improving it piece-meal as they went along. In this course they have been surprisingly successful. Will they be the leaders in a world-wide experiment?

War is crime. War is a crime made up of exactly the crimes liable in all countries to the severest penalties; murder, arson, plunder, rape and poisoning. Can men of hearts and brains longer cling to the notion that such unlawful acts can be lawfully perpetrated—laws of war, legal lawlessness? Why not laws of murder, laws of arson, laws of plunder, laws of rape, laws of poisoning? Is it possible to imagine a more stupendous misconception, a more tremendous inconsistency?

The example of an aggressive war teaches all the people of the nation a lesson of crime. While the nation itself acts the part of a criminal how can it hope to instruct its citizens in morality? A war to take by force that which belongs to another is identical in principle with the deed of the robber. The incidental slaughter in battle corresponds exactly with the murders the robber commits in getting his booty. Logically the state should deny to itself utterly the right to use military force against another except in self-defense.

The moral law applies as well to nations as to persons. States are the persons governed by international law. Why shall not such persons, as in the case of natural persons, be subject to the wholesome doctrine that the liberty of an individual ceases where the rights of another commence? Is there any reason why the freedom of conduct of an international person, viz., the state, shall not be limited by the rights of other persons, viz., other states? What is the source of the claim of license for the state in international society, that may not be urged for the individual within the association of men we designate as the state?

Speaking for the Court in *Penhallow vs. Doane*, 3 Dallas 54, Mr. Justice Paterson took occasion to say:

"A distinction was taken at the bar be-

tween a state and the people of a state.. It is a distinction I am not able of comprehending. By a state forming a republic (speaking of it as a moral person), I do not mean the legislature of the State, the executive of the State, or the judiciary, but all of the citizens which comprise that State, are, if I may so express myself, integral parts of it; all together forming a body politic."

What is there in the nature of things which prevents the application to the conduct of national persons of those tested principles of right conduct which have application to the acts of individual persons? The same fundamental precepts, the same ruling points of view, that we call moral in the case of an individual, are also moral in the case of a nation. I find support for this position in the words of Chancellor Kent, who in his *Commentaries on American Law*, wrote:

"States, or bodies politic, are to be considered as moral persons, having a public will, capable and free to do right or wrong, inasmuch as they are collections of individuals, each of whom carries with him into the service of the community the same binding law of morality and religion which ought to control his conduct in private life."

So soon as nations, both great and small, accept the doctrine that they are moral persons, and as such are bound to conform their conduct to moral laws, the basis is laid for the recognition of the like personality of other nations, and a true society of nations begins to appear.

With individuals, moral excellence and political rights are apart from intellectual competence or material possessions. The right of the individual to membership in a society of individuals arises out of the willingness and the capacity to observe loyally the principles and to follow earnestly the ideals which are characteristic of such societies at their best. Why not the same test for membership in the society of nations? It is only by full recognition of the binding force of this conception in all human relations that a state can hope to deal successfully with its morally weak citizens. Judicial settlement of international disputes in accordance with fixed principles is indispensable to a complete scheme for the elimination of crime.

War is crime, and mankind has got to get

rid of it. Mankind got rid of human sacrifice, of cannibalism, of torture, of slavery, of witchcraft, of private wars and duelling, all once legalized evils.

Think about it: War a crime, and public international law reversed! The society of states organized to police the world, the commonwealth of nations transformed into a law-giving and law-applying community. A social and political revolution you say? No, the logical outcome of centuries of thought and struggle in darkness and ignorance, a juridical upsetting, the task of the legists of the world, and if they will, an achievement of the near future.

Law is one of the chief factors of human progress. The cultivation of the highest objects of existence, science, art and religion, is possible only under conditions which the law alone can bring about. To the extent that law operates to further these conditions it levels the road upon which science, art and religion celebrate their triumphal march.

The story of the race is a slow ascent from very primitive and crude beginnings to higher and ever higher levels.

"Three steps there are our human life must climb"—of two of them only is it here pertinent to speak.

"The first is Force.

The savage struggled to it from the slime
And still it is our last, ashamed recourse."

"Above that jagged stretch of red-veined
stone

Is Marble Law,
Carven with long endeavor, monotone
Of patient hammers, not yet free from flaw."

What is in truth a wrong, not infrequently stubbornly appears with the form of a right. But wrongs and suffering are the soil upon which the flower of the law blossoms. If not in this day and generation, in another; for man is a temporal and limited being, and is not the measure of things.

"* * * * Other spirits there are standing apart
Upon the forehead of the age to come;
These will give the world another heart
And other pulses. Hear ye not the hum
Of mighty workings in the human mart?
Listen awhile, ye nations, and be dumb."

PATHFINDERS

H. S. LOTT, M.D., Winston-Salem

Annual Address before the Graduating Class of Nurses, and Alumni Association, of The Joseph Price Memorial Hospital; Philadelphia, June, 1926

"Yet there's none so unhappy,
but what he hath been
Just about to be happy,
at some time, I ween;
And to most of us,
ere we go down to the grave,
Life, relenting, accords the good gift
we would have."

If the question had been asked me: What honor would you hold highest, from the profession, from the nurses, or from your clientele?; my reply would have been: Let me stand where I am standing tonight, in this classic educational center, in the presence of a group of nurses on their graduation day, in an institution whose walls echo the vital truths of the best teaching of his era, and in honor of the man who gave his work and his teachings to posterity.

Atmosphere and environment favor growth and development. Educational centers, of historic renown have and hold in perpetuity, this halo of glory about them; and in its gentle and inviting influence, the mind awakens to its best, in a life-work of accomplishment;—

For—

"Life is not that which—
without us we find,
Chance, accident merely,
but rather the mind:
And the soul—which, within us
surviveth these things:
Our real existence hath truly—
its springs
Less in that which we do—
than in that which we feel."

Notable among the men, who have marked the way for other men to follow, in this center of thought and teaching, is John S. Parry. In the year eighteen hundred and seventy-five, Parry gave to the profession, in concise

and vivid word painting, a picture of the clinical history of ectopic gestation; with a graphic account of its accidents, and of how they should be met.

Like the masters who live in literature and romance, are the masters who live in surgery and its teaching. Parry recognized the erratic doings of this product of conception, and clothed them with functional life. And function is the soul of the human economy; giving to each organic structure the power of procreation, and the spirit of perpetuation of its kind. Just as the glint of the morning sun gives life to mountain top and ocean, so function portrays the vital glow of procreative organs. It was the rhythm, the come-and-go, of the pains, with an interval of rest, that placed their effort at expulsion within the anatomic realm of unstriated muscular fibre; whose function it is, to throw off an additional burden, when it has reached its limit of endurance; and is characteristic of the life, and the doings, of the uterus and appendages.

Just ten years later, it was my privilege to become the pupil of Doctor Joseph Price, then at the zenith of his glory; and each morning's work was almost sure to bring a demonstration of the truth of the teachings of Parry. In suspected cases, and while making the incision, his guests were told that "a black omentum" would establish the diagnosis of ectopic gestation: the flooding with blood, from a ruptured sac, being its cause; and, like the old "pelvic hematocele," long shrouded in mystery, would come from no other; also, that in this patient, the rupture would be found in the distal end of the tube, those occurring in the proximal end, being opened, most likely, by the coroner.

Lawson Tait, of Birmingham, England, gave us vivid word picture of pelvic pathology, and of gynecologic problems that will live, bearing with them the truth that gynecology means, not ablation or distortion of

organs, but conservation of the procreative function of womanhood. His recognition of the focus of origin, and his emphasis of the vital importance of this focus, with his simplicity of technique, are features marking the master, and his saying that "the workman who needs complicated tools, is an inefficient one, or a quack," establishes his independence of thought, and of action. Accurate in observation, original in descriptive account of his findings, and fearless in surgical procedure for removal of pathologic foci; Tait, from a manufacturing center across the water, took the lead in abdominal and pelvic surgery, attracting to his clinics guests, and pupils from everywhere.

Among them, Doctor Price was an ardent friend and admirer; paying often, in the midst of his work, a tribute to his skill and wisdom.

J. Marion Sims, in the year eighteen hundred and forty-nine, while walking from his office to his home, kicked up in the road a piece of fine brass wire, bringing with it the thought of sterile sutures. Just a short time before, and by accident, he had found that by putting a woman in the "knee-chest" position and retracting the posterior vaginal wall with the finger, two very important things could be accomplished. First, gravity, aided by the atmospheric pressure, would give the *vis a tergo*, and the *vis a fronte*, to restore the uterus to its normal position; and next, and most wonderful of all, that this exposure, *never seen by man before*, made it possible to repair a vesico-vaginal fistula.

This discovery, with its vision, set in motion the currents, that have come, have grown in volume and momentum, and borne to us the lights that will live, in this field of service today.

Because of more skillful obstetric service vesico-vaginal fistula is almost a thing of the past; but plastic surgery, and all that it means in the repair and restoration of the pelvic floor and its outlet, stands a monument to Sims and his devotion, and his sacrifices of a lifetime; and assures to him in perpetuity, the title that he bears, of "Father of Gynecology."

Doctor Sims' student days had been spent in Philadelphia. With this wonderful discovery, and its vision, leaving his field of work in Alabama, he returned to the center

of his Alma Mater in pursuit of perfecting and establishing this gift, with its future of service to woman.

Failing to awaken professional interest, broken in health, and the victim of discouraging circumstances, he returned to Montgomery. The climate of this section did not seem favorable to his recovery. After realizing this fact, and in the year eighteen hundred and fifty-three, he, with his family, returned to New York for a home.

With restored health came renewed activity, crowned with success in his effort to establish a hospital in which to work, and demonstrate the value of his discovery. Therefore, the Woman's Hospital of New York, through the efforts and sacrifices of Sims, became an accomplished fact, and he was soon in need of an assistant. Giving Sims' own account of it; his recognition, and appointment to this position of Thomas Addis Emmet, is beautiful, and very like the man who gave it. "A young lady friend in the South was married to Doctor Emmet of New York. As I was looking for an assistant, I did not know that I could more handsomely recognize the friendship of former days, than to appoint the husband of Mrs. Emmet as my assistant. So, to the accident of good fortune in marrying a beautiful Southern woman, Doctor Emmet owes his appointment to a position which he has long and honorably filled in the Woman's Hospital."

Doctor Emmet was a master in plastic surgery. Following the lead of Sims, his conception, and his perfection of the work, in every minute detail, gave to plastic surgery a place that no other feature of surgery can fill.

Plastic surgery, you know, restores function, and this is gynecology. Much clumsy work may be done within the abdomen, and the patient never know; but plastic surgery tells! It is the care in minute detail of toilette, technique, and material used, that gives stay to repair of the pelvic outlet. Emmett emphasized this, telling us that the needle and the thread must be of the same size; else, the track through the tissue will be filled with blood and serum, and prevent essential primary union of opposing surfaces; and in this teaching lies the keynote to the success, or the failure, of all plastic surgery.

Plastic surgery today is being overshadowed, and its field of usefulness encroached, by the more spectacular work of the abdomen, and other regions of the anatomy. Men are slighting it, and doing what they call "the anatomic repair," instead of the surgical one; in which success follows the teachings of Sims and of Emmet, and in which, unfortunately, failure tells on us, the first time the woman goes shopping; and the "passing of the gynecologist," is only prophesied by men who are not gynecologists at all.

Doctor Joseph Price loved these men, and loved their ideals; and with the simplicity, and perfection, of toilette and technique of the master, was a gynecologist, a teacher, and an honest man. His presence was an inspiration, calling forth the best that was in you. His antagonisms were "the price you pay," and a tribute to his honesty, and his accuracy of conception, and earnestness of purpose. To me he was both teacher and friend. His first report to the profession of his work was of one hundred sections for pus tubes, done in the tenements of South Philadelphia, with one death. Teaching, you know, is the greatest thing in the world; not that it profits the teacher at all; the teacher is forgotten, but the teaching lives!

Doctor Price made no appeal to prejudice and ignorance; this was beneath the dignity of the man. The principles of surgery, known and lived, and applied in every detail of his work, made the undercurrent of his success, and were the reason for his low mortality, and the post-operative comfort of his patients. He had the courage to tell an audience that simple, direct methods accomplish most, that clean parallel incisional lines unite best without chemicals, that swelling in an incision means infection, and that the abdominal wall is not a stomach, nor its function the digestion of foreign material.

Thus, for instance, and for emphasis, because of its spectacular appeal to an untutored audience, in the toilette and technique of abdominal surgery, the man with simple, direct methods, who has recognized the pathology, with its end results, is very much overshadowed by the man who is feeling his way, surrounded by an immense array of instruments, and other paraphernalia, opens the abdomen widely, exposing all viscera, in search of supposed pathology, stuffs

in yards of dry gauze, filling every available space with its meshes, forcing vital contents into every distortion of location, and either forgetting, or ignoring the fact that both trauma, and chemicals, are disastrous to peritoneal surface, destroy granulations, and delay repair; thus inviting post-operative adhesions, and other avoidable sequelae.

Forgive me for painting a picture that speaks so plainly; but the motive guiding it is my love for surgery, life-saving surgery, which lies only in careful diagnosis, approximate location of causative pathology, with its possibilities of end-results, and direct, simple removal, so far as may be consistent with surrounding structures. That cleanliness is essential goes without the saying; but may we not insure this without the introduction of elements that are assuredly destructive to granulation and repair?

Gynecology, really, is just coming into its own. Joseph Price was a gynecologist, Lawson Tait, Marion Sims and Emmet—were gynecologists; and their work, with the lights shed on functional forces by Parry, has laid a foundation that will last, and bear in its superstructure a conception of service, creative, and protective, to the functional life of woman.

With puberty comes the menstrual wave, accomplished in minor cycles of turgescence, and of retrocession, and the awakening of the procreative organs. Like the ebb and flow of the ocean wave, the blood currents come and go. Twenty-eight days complete the cycle, and the uterus is the storm center, and the organ of menstruation. Vague theories from many sources have fixed the control of this function upon certain nerves, and upon ovarian stroma, but this has never been established.

The fact that the uterus, with its turgescent endometrium, is the storm center throughout the cycle of recurrent menstruation and the subsequent period of retrogression, and nature's drainage conduit, remains beyond dispute.

Retrogression of vital currents, with atrophic changes, subsequent to this era, completes the life-cycle of womanhood. As the come-and-go of circulatory currents throughout the era of effulgence and functional life, under control of cerebral centers, establish and perpetuate functional activity, with its

periods of rest; so the cycle is closed by the recessionary wave with atrophy of organic structure, when its terminal duty is done.

Gynecology, therefore, means safety and comfort throughout this, the final era of woman's life; not alone—

"How fared the ship

Through the trials she pass'd?"

but,

"What is the state of the ship,

At the last?"

Always, in the midst of a feature of plastic work, devised and established by Sims and Emmet, Doctor Price paid a tribute to the man who had given this repair, now finding its perfection of accomplishment, to the comfort and well-being of woman. Within the pelvis and abdomen, the work of Doctor Price was his own; prompt location and quick removal by simple technique. Median incision, following closely the *linea alba* and always impressing upon his audience its importance as a guide. No ties of vessels in the muscular wall, and almost no pinching with hemostat. Little vessels retract, if you'll only wait a second, and foreign material and pinches in the walls of the incision favor infection and delay primary union. This is surgery. The through and through closure, with silk-worm gut, properly done, is the only real surgical one. It everts peritoneal edges, and apposes parallel incisional lines of all structures, which, if clean, unite best without foreign material or chemicals to be either digested or thrown off by sloughing; and it leaves no dead space for the accumulation of fluids.

Medical literature offers a maze through which the young practitioner passes in bewilderment, and the only wonder is that he does not stray further, and more often. Just as untrammelled freedom of the press publishes crime and immorality, and sows broadcast their seed, in brains and hearts found fertile for the growing, so do unrepressed and mongrel medical journals teach and foster unsound principles of medicine and surgery. The want of today is not for literature on subjects medical and surgical, but for the power to discriminate between good and bad; the ring of the false, and the ring of the true. Like all human effort, a large mass

of it sinks into restful oblivion. Just here and there, untarnished, and untattered by time's progress, stand out in bold relief the work and thoughts of men endowed by nature with the power to read her lines correctly, and follow closely their teaching. The surgical picture book, while having a sphere of usefulness, portrays rather the financial resources of a wealthy corporation, than the native skill, wisdom and conscience,—the three vital essentials,—of the surgeon. These are best portrayed either through personal contact, or in close study of the volumes which set forth the spirit of the man, in the writings of the life-work.

At a banquet, the best is kept for the last. And, do you know, young ladies, that this honor to me is greatest because it comes by request of a group of nurses, on their graduation day? The most beautiful tribute to a life of service that I have ever known, was given by a very lovely woman on the day of her death. Her minister in loving tenderness expressed sympathy and regret that she must go. "Why!" she replied, "don't pity me; this is my graduation day." This is your graduation day, from the primary school. Your real education, with its fullness of reward, is to follow.

Florence Nightingale deserted the aristocracy of birth to create an aristocracy of the profession. Did you ever stand upon the bank of a beautiful, placid lake and throw a pebble out, and watch it fall, and see the circling waves go out, and out, and out, until they reach the farthest shore? That is teaching.

Florence Nightingale did this, casting her life into the maelstrom of confusion, and creating inspirational waves of service to suffering humanity, that have reached every distant shore.

It was she who gave to nursing the title of "the finest of the fine arts;" thus lifting it from the realm of purely voluntary religious, or personal service, on the one hand, or unskilled manual labor on the other. "Miss Nightingale was possessed of a fascinating personality, which, in its blend with her mental brilliancy and wide learning, made her conversation and her writings of absorbing interest."

Old Manhattan, the Bellevue of New York, under the guidance of Sister Helen, has the

honor of taking the initiative in the United States in the introduction of the Nightingale methods and standards in the teaching and control of nurses. Some years later, and at Blockly, in this classic center, "Miss Alice Fisher, one of the most admirable products of the Nightingale school, accomplished incredible things," dying at her post, triumphant.

Prior to this, the Pennsylvania had embodied in its service, the highest intelligence and humane ideals of the Friends, in which skilled nursing was a feature, and, in the year eighteen hundred and thirty-nine, this group of philanthropists organized a service and issued an earnest appeal to young women to enter the calling of nurse.

This is history; it is true, and every step of its making was gained through sacrifice and steadfast devotion to high ideals. Today nursing is a profession; but, having gained the house-top, let's not forget the ladder that has put us there. Conditions have changed, and you, young ladies, please remember, will be the product of this change, in its perfection of development. Your affiliation with a general hospital is both wise and helpful. Bedside experience and teaching in all of the ills of human life fits you for the world-work to which you go, and brings you into sympathetic and professional touch with sister nurses from all schools and organizations.

In abdominal and pelvic surgery you have the best the profession can give. Your "Workman" is a Master, taught by a master hand and led by motives that are pure and fine, for uplift and enlightenment. In his life and in his work, in keep of the master trust, he points the way that other men may follow.

But the architect, however wonderful, and his group of workmen, each a master in his field of art, are helpless without material with which to work. You! young ladies, are the material. You make possible the structure, that the architect plans, and his workmen build.

And now, will you forgive me, if my farewell thought is one of practical, work-a-day value, culled from the experience and observation of many years in all features of professional service. It is about obstetrics which today is taking its rightful place. Men are having the audacity to say that pregnancy

and childbirth are pathologic, when we know that it is the highest and holiest function of womanhood.

Obstetrics is surgery, demanding the same perfection of toilette and of technique as the major abdominal operation. Good obstetrics with proper care throughout the puerperium means preventive gynecology; more than fifty per cent of the ills, and discomforts of the later years of woman's life having their origin in unskilled or ignorant service at the time of confinement. Now! please get just two facts firmly fixed in your minds. First, that obstetrics is surgery; and, second, that two lives are at stake always. With these two thoughts in the lead, can you tell me of a broader, finer field for your trained service in the life-work that you have chosen?

Obstetric nursing as a rule is not popular, and is not sought by nurses; it is work, real work; but it is real work only that counts; and the lives, and the work, of those who marked the way were of sacrifice.

Is there to be a Pathfinder among you, whose ideals will bring to her, in vivid, glowing calling lead the "Vision Splendid?"

"Where are you going, Great-Heart,
With your eager face and your fiery grace?—
Where are you going, Great-Heart?"

"To fight a fight with all my might
For Truth and Justice, God and Right,
To grace all Life with His fair Light."
"Then God go with you, Great-Heart!"

"Where are you going, Great-Heart?"
"To end the rule of knavery;
To break the yoke of slavery;
To give the world delivery."
"Then God go with you, Great-Heart."

"Where are you going, Great-Heart?"
"To hurl high-stationed evil down;
To set the Cross above the crown;
To spread abroad My King's renown."
"Then God go with you, Great-Heart."

"Where are you going, Great-Heart?"
"To cleanse the earth of noisome things;
To draw from life its poison-stings;
To give free play to Freedom's wings"
"Then God go with you, Great-Heart."

"Where are you going, Great-Heart?"
"To break down old dividing-lines;
To carry out My Lord's designs;
To build again His broken shrines."
"Then God go with you, Great-Heart!"

"Where are you going, Great-Heart?"
"To set all burdened peoples free;
To win for all God's liberty;
To 'stablish His Sweet Sovereignty."
"God goeth with you, Great-Heart!"

SOME EXPERIENCES, OBSERVATIONS AND VIEWS OF A PRISON PHYSICIAN*

L. JACK SMITH, M.D., Wilson

The proper conduct of prisons is a subject claiming the attention of the officials and the citizenry of our State at this time; some holding to the belief that too much liberty and leniency is shown to prisoners, while others believing that barbarous and inhumane treatment is being handed out to the poor down-trodden prisoners. An analysis of the subject will show that both are right and both are wrong. It is probably necessary that we have both extremes in order to determine the happy mean.

It is not my purpose to take sides with either extreme, but rather to set forth certain facts based upon seven years observation and experience as physician to the prisoners of Wilson County. The physician, as is well known, holds a rather unique position in relation to the proper study and understanding of human character. A thorough study and understanding of the prisoner is necessary to the proper control of his conduct.

After much thought, observation and experience, I have evolved the following principles, that should govern and control a prisoner.

1—He should be provided with a safe, comfortable sleeping place. By this we do not mean that each prisoner should have a mahogany four poster with high priced mattress, linen sheets and down comforts, a room with private bath; neither do we mean he should be compelled to sleep on a hard cement floor, with dirty, greasy, scant bed clothing.

2—He should be clothed with substantial clothing and shoes in keeping with weather conditions. By this we do not mean he should have patent leather shoes with silk socks, fancy spats and navy blue silk underwear, but rather that he should be clothed with coarse durable materials.

3—He should have enough substantial nourishing food. Nourishing food does not mean that he be served with milk fed broiled spring chicken on toast, nor with any fancy pastries; but rather with a well balanced diet consisting of meats, vegetables and starches.

4—He should be compelled to labor in accordance with his physical ability, which should be determined by the attending physician. Manual labor is conducive to happiness and good health when done in reason; "an idle brain is the devil's work shop" and produces morbid thought, crime and all the attendant evils.

5—He should receive medical care, when sick, equal to that received by the average family. The physician should be called to attend a prisoner exactly as a considerate, conservative father would call a physician to attend the ills of his own family. Calling a physician to attend every little imaginary illness has a tendency to cause the prisoner to become a constant malingerer. Prisoners as a rule are good patients. They readily respond to rational treatment, but malingering must constantly be considered by the physician. This is decidedly the most annoying part of a physician's duties, to decide when the patient is malingering.

It is my policy to give the prisoner the benefit of the doubt, but there is great danger of destroying the morale of the camp when we excuse one prisoner from work, who is deliberately malingering. Fortunately this does not occur often. Special attention must be directed to venereal diseases. We find that from 20 to 35 per cent of all prisoners have syphilis either in primary, secondary or tertiary stages. Most of them are in tertiary stage. The energetic treatment of syphilis has two aspects; cure of the patient if possible for his own benefit, and a public health value in helping prevent the spread of this disease to others when the prisoner gains his freedom. The treatment of gonorrhea gives

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

similar results.

You will observe that these five principles enumerated have no direct bearing upon the moral and spiritual welfare of the prisoner but they do have a decided *indirect* bearing upon his spiritual and moral conduct, which, when provided in conjunction with other specific and general measures, will make him a better man, physically, morally and spiritually. Now that we have enunciated these principles, the question naturally arises, how are we going to carry them out? Three factors enter into this problem, two of which are positive and the other negative. The positive factors are: first, the superintendent and guards; second, the attending physician. The negative factor includes a large number of well meaning people who allow sentiment instead of common sense to govern their speech and acts.

If I were requested to point out the two greatest obstacles in the way of carrying out the proper treatment of prisoners, I would unhesitatingly say: first, a bruté superintendent and guards, who are sometimes placed in charge of prisoners, that kind of man who would abuse and brow-beat his wife and children, that hard boiled, self conceited ass who gets drunk on a little authority and takes advantage of his position to curse and abuse a prisoner whom he knows has no chance to retaliate. Language is inadequate to express my contempt for this type of so-called man. It is this type of man who discredits and arrays the public against all the good men who are placed in authority. Then comes the sentimentalist as the second great factor in the way of proper control of prisoners: "God be merciful to them, for they know not what they do." They hand out large gobs of sticky maudlin sentiment, forgetting justice and the duty of the law to punish crime for the protection of society. They have a false idea and conception of the mental processes of a criminal. They try to place themselves in the position of the criminal without due consideration of the difference in the mental processes of the criminal and themselves. The sentimentalists forget the crime committed; they forget the unfortunate victim of the criminal who suffered as a result of the crime.

To illustrate this point, visit a prison with one of these hypersensitive sentimentalists

and see him shrug his shoulders and then ask, "how would you like to eat that coarse food, sleep on that bunk, with all your liberties shut out by those cruel bars." You of course as a good citizen without the mind of a criminal, could not understand how you would react to such conditions, neither could you conceive of how your orderly, law abiding mind would let you commit the crime that put those prisoners where they are. Of course you would not relish the food and sleep well on the bed provided for a prisoner; however, as a matter of fact in many instances the food, the bed and even the locked cell are better than the food, the bed and room the prisoner had been accustomed to before being caught in his crime. The failure of the sentimentalist to allow his mind to deal with realities makes him an unintentional menace to society. My contempt for the maudlin sentimentalist is tempered only by my pity for his ignorance of the conditions as they are. In this connection, I would like to pay my respects to any unscrupulous prison physician who winks his eye at any wrongs going on in his camp or jail and makes no effort to see that these wrongs are righted. Any physician who neglects his professional duties to prisoners who are dependent on him for protection of health and life, if there be such, is not worthy of the position he holds.

Now that we have discussed the negative side of how to carry out these principles, it becomes necessary to deal with the positive side, which is self evident in view of the negative discussion. Therefore the factors necessary for the proper control and conduct of prisoners are: first, a superintendent of intelligence, a born leader of men, of high moral character, sound judgment and firmness tempered by justice, the same rule in the selection of guards being applied only in a lesser degree; second, a physician who is competent and conscientious; third, a sympathetic understanding public who are not afraid to make constructive criticism in the light of first hand knowledge of any wrong that may need correction.

Hearty cooperation of all concerned, being governed by justice and knowledge of conditions as they are, will solve the problem of proper control and conduct of prisons, protect society and reduce crime.

There are a number of physically defective

prisoners in our camps who are repeated violators of the law, having been given suspended sentences by the courts for the first and probably the second offense. They had the feeling that because of their physical condition, the courts would continue to deal leniently with them by payment of costs and an admonition to "Go and sin no more," but the strong arm of the law cannot deny justice longer, so they are sent out to serve a sentence at hard labor. Then come along the influential friend and relatives, the lawyer and others to make pressure on the attending physician to get him to certify to a physical disability, this certificate to be used along with a long list of names of petitioners, many of whom sign without any personal knowledge of the merits of the case. Then the Commissioners of Pardons and the Governor are besieged in an effort to secure a pardon for this "unfortunate victim." Many times the county officials take a hand in an effort to secure a pardon for those physically unable

to labor enough to pay for their keep. These people are all well-meaning in their efforts to help the unfortunate, but they forget their duty to uphold law and order and as a result they encourage the prisoner to repeat the offense.

These physical disabilities are sometimes real and sometimes imaginary, sometimes causing complete disability and again only partial disability. To avoid all this annoying pressure on the physician, certificates of disability should never be given except at the request of the Pardon Commission and Governor.

I have carefully looked over the new proposed rules and regulations governing the sanitary management of convict camps and prisons, now ready for adoption by the members of the State Board of Health, and find nothing in them unreasonable or impractical. If conscientiously obeyed by the prison officials, they will secure the maximum health, comfort and safety to the prisoner.

UTERINE HEMORRHAGE*

R. D. McMILLAN, M.D., Red Springs

Unusual bleeding from the uterus at or between menstrual periods occasions alarm in the mind of the patient, or the members of the immediate family, and is one of the common symptoms for which the gynecologist is consulted.

The various conditions causing uterine hemorrhage fall into two main groups, according as they depend on existing or recent pregnancy, or not. If we bear in mind these two groups a study of uterine hemorrhage becomes much easier.

HEMORRHAGE DEPENDENT ON EXISTING OR RECENT PREGNANCY

ABORTION

Bleedings during pregnancy are always preceded by a varying period of amenorrhea. In the early months the most usual bleedings occur in threatened abortion, inevitable

abortion, and a large class of incomplete abortions, either spontaneous or induced, in which the contents of the uterus have been incompletely evacuated. In these cases the hemorrhage is always irregular and persistent, and sometimes copious. Often the patient has no positive knowledge that any portion of the contents have been passed. On examination the uterus is found to be large and tender with cervix partially open; on bimanual examination some detritus is expelled. Usually there is some elevation of temperature, and slight leucocytosis.

ECTOPIC PREGNANCY

Ectopic pregnancies account for the next largest number of irregular bleedings during the pregnant state. Twenty-five years ago few physicians knew anything at all about ectopic pregnancy. Today nearly all cases can be recognized when rupture occurs, and many of them are diagnosed before rupture, when operation can be performed with rela-

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tive ease and little danger to the patient. The cardinal symptoms of ectopic pregnancy are a delayed, skipped or anomalous menstruation followed by colicky pains referred to the lower abdomen, usually to one side, often mistaken for gas colic or indigestion. On pelvic examination the cervix is soft, is always sensitive to motion. The uterus may be displaced to one side or forward by a sensitive mass in one or the other fornix. The temperature is usually a little above normal; there is moderate leucocytosis; red cells and hemoglobin may be slightly or markedly reduced. Remember the history, characteristic bloody discharge and sensitive cervix are the most constant suggestive signs.

HYDATIDIFORM MOLE OR CYSTIC DEGENERATION OF CHORIONIC VILLI

Occasionally a pregnancy will apparently proceed normally for two or three months, then there will appear a little brownish discharge, or the patient may not feel particularly well. The case is watched for a few weeks when it is realized that something is radically wrong. The physician does not want to interfere or terminate a normal pregnancy, neither does he want to neglect his patient. Finally, it is apparent that, because of continual bleeding, the uterus must be emptied. Upon dilating the cervix you at once encounter quantities of small cysts that vary considerably in size from that of a millet seed to that of a grape and always have the appearance of springing from one another. Cullen says they remind him of variation in size of the individual grapes seen when a grape vine has worn out or gone to seed.

Sometimes after a hydatid mole has been removed the patient continues to bleed. Upon examination the uterus is found to be enlarged and now and then a metastasis may be noted in the vagina or elsewhere. When the process is advanced hemoptysis may be noted due to metastasis in the lungs. After a hydatid mole has been removed one is always suspicious that a chorio-epithelioma may develop or may have existed prior to removal of the mole. The histologic picture of hydatid mole and chorio-epithelioma are so much alike that a diagnosis from scrapings must not be relied upon, only a section from the wall of the uterus will suffice, and this of course is available only after removal of the

organ. In suspicious cases do not wait for developments and let metastasis occur. I urge immediate operation for removal of the uterus.

BICORNUATE UTERUS

Pregnancy in one horn of a bicornuate uterus is really extrauterine when considered from the standpoint of the non-pregnant horn. If uterine bleeding exists when there is tubal pregnancy we can suspect in some cases at least, bleeding from the non-pregnant horn of bicornate uterus when pregnancy exists in the other horn.

I only mention in the latter months of pregnancy placenta previa, and premature separation of normally implanted placenta as the chief causes of uterine hemorrhage.

UTERINE HEMORRHAGE NOT DUE TO RECENT PREGNANCY

SYSTEMIC DISEASES AND DISEASES OF REMOTE ORGANS

First, remember that some constitutional conditions increase pelvic congestion predisposing to uterine hemorrhage; for instance purpura, cardiac insufficiency, cirrhosis of liver, chronic nephritis; also some acute infectious diseases including influenza, and the exanthemata. These hemorrhages are of course incident to the medical condition with which they are associated. The causes of the hemorrhage are evident and as a rule the constitutional condition and not the bleeding receives attention.

Though it is not thoroughly understood just what part the endocrine system and the individual sex glands play in the woman's sexual life and the development of her generative organs, it is known that she is wholly dependent for well being upon their harmonious action. In hyperthyroidism, because of the overactivity of thyroid, amenorrhea is the rule. In cases of deficient thyroid function there is often an increase in the menstrual bleeding. In a much smaller but still not inconsiderable group of cases, however, Novak, of Baltimore, very aptly describes a condition of uterine bleeding that may be observed in the entire absence of any demonstrable gross lesions of the pelvic organs. Indeed, extremely profuse hemorrhage may be observed in children at or near the age of puberty. Far more frequently such

bleeding is noted in women at or near the menopausal age, although no period of reproductive life is immune from this possibility. Cases of this type are commonly designated as functional, idiopathic, or essential.

The hemorrhages are occasionally mild, and may tend toward spontaneous correction; more frequently they are sufficiently severe to lead the patient to seek medical advice; and frequently they are quite alarming, causing grave concern to both patient and physician. In those cases which occur at or near the climacteric, it can at once be seen why this should be so, for free bleeding at this period brings with it the apprehension of cancer.

When the bleeding is sufficiently severe to cause concern in young women, and even more emphatically during middle life, the importance of a diagnostic curettage cannot be too strongly urged. Especially distinctive is the finding of hyperplasia of the endometrium to the naked eye; the endometrium in some cases is so enormously overgrown that huge quantities are brought away by the curet. Microscopically there is a general increase in both the stromal and epithelial elements, and perhaps the most distinguishing feature is the marked disparity of the glands, many of which are large and cystic, while others are quite small. There is thus produced a very characteristic Swiss-cheese pattern, often so marked that a glance through the microscope is sufficient to make the diagnosis.

In this form of endocrine imbalance organotherapy has some place, though one hesitates to elaborate on this subject, as the results can scarcely provoke any degree of enthusiasm. Often, however, they are distinctly gratifying. Thyroid extract, especially if there are other manifestations of hypothyroidism, should by all means be tried. In view of the common absence of the glands of these cases corpus luteum should be given a trial. Posterior pituitary extract often yields good results; daily injections of 1 c.c. for six days should bring about noticeable improvement either by its action on muscles of uterus, or to its specific endocrine mechanism.

REPEATED CURETTAGE IN YOUNG WOMEN

In some cases curettage will be followed by

relief from the hemorrhage. In many cases this will be permanent; but in a large proportion, certainly in not less than one-half, recurrence of the symptoms will be noted, perhaps almost immediately, though in other cases not until many months later. In women who have passed the reproductive period, and in whom the matter of child-bearing need not be considered, or when this is distinctly subordinate to that of health, the indication is clear for radiotherapy. Here, indeed, we have the almost ideal indication for radium in gynecology for menstruation can be checked promptly and with certainty.

BENIGN CHANGES IN MUCUS MEMBRANE OF CERVIX AND BODY OF THE UTERUS, AS POLYPS

Cervical polyps bleed a little. The patient complains of slight intermenstrual bleeding and in cases in which the surface of the the polyp is inflamed there may be a slight purulent or watery discharge.

Polyps in the body of the uterus tend to produce excessive menstrual periods. There may be some slight intermenstrual bleeding as well.

UTERINE TUMORS,—MYOMAS, ADENOMYOMAS, AND CARCINOMAS

The uterine *myomas* are very common and in the beginning are interstitial; as they grow many of them become subperitoneal. A myoma may grow to be large without in any way influencing menstruation, but as soon as it encroaches on the uterine cavity the periods are prolonged. In some cases, especially of the submucous type, the tumor becomes necrotic causing a foul and almost continuous watery discharge from the uterus. This tissue often feels soft, but on traction is found to be tough. Cancerous tissue on the other hand is friable.

Adenomyomas generally cause a very profuse and prolonged menstruation, but no intermenstrual bleeding. At the period there may be grinding pain in the uterus, due undoubtedly to swelling of the musoca in the diffuse growth of the uterine wall. Curettage as a rule yields perfectly normal musoca. When adenomyoma exists the uterus tends to become adherent to the surrounding structures.

Sarcomas: Uterine sarcomas are relatively rare. Should sarcoma develop in the endo-

metrium, it can be diagnosed from scrapings. Sarcoma is rarely diagnosed from myoma until the abdomen is opened and the tumor cut into. Grossly sarcoma can easily be broken up with the finger, whereas manipulation makes no impression whatever on the myoma.

DISEASES OF ADNEXA

Salpingitis. In cases of purulent salpingitis many patients have uterine hemorrhage. Time and time again the surgeon is in doubt as to whether the given case is one of tubal pregnancy, or pelvic inflammation. Fortunately, in both instances it is necessary to open the abdomen and the temporary error in diagnosis does not in any way militate against the patient's welfare. Inflammation of the ovaries is always secondary to or associated with salpingitis.

Ovarian Cysts and Ovarian Tumors. Occasionally these cause slight hemorrhage from the uterus. The presence of tumors, independent of the uterus, gives us the clue as to the hemorrhage, and with removal of the ovarian growth bleeding ceases.

REMARKS ON MALIGNANT CONDITIONS

As a result of the campaign of education waged by the American Society for the Control of Cancer, and by local medical societies, patients are coming to the physician earlier and earlier so that cases are now seen in which the physician is by no means sure whether he is dealing with cancer or not. All metrorrhagias are serious, especially after the menopause. Such patients should have a wedge of the suspicious area cut out and examined microscopically. The most malignant of all uterine cancers, adenocarcinoma, frequently begins up in the cervical canal, and if it so happens the cylindrical epithelium extends down beyond the external os, as it sometimes does, the cancer can be seen on vaginal examination.

SUMMARY

In making a diagnoses of uterine bleedings a detailed history is most important, for the menstrual habit of every woman is peculiar

to the individual and the variation from this habit suggest the possible diagnosis. For example, the woman who bleeds from a sub-involution will present no change in her menstruation until after the birth of her child, when the menstrual period may become more profuse or intermenstrual time may be lessened. On the other hand, the woman with a myoma will show a definite increase in the amount of her menstruation which becomes progressively greater from month to month, this in turn may be compared with the case of threatened abortion, with period of amenorrhea, profuse bleeding, passing larger quantities of clotted blood. All necessary information can be brought out by asking each patient questions on the following points:

1. The time at which puberty occurred.
2. The length of each period.
3. The regularity and average duration of the interval.
4. The amount of blood lost.
5. The date of last menstruation.
6. Has the menstruation always been profuse since it began?
7. Has it been increased by marriage or child-birth?
8. Does the increased flow date from a miscarriage?
9. Has the increase in blood loss been of gradual occurrence, or has it appeared suddenly?
10. Has there been an attack of pelvic inflammation, and what was its relation to the change of menstrual habit?
11. Has there been any increase in size of the abdomen?

While a presumptive diagnosis is suggested by the history, the final diagnosis in any case of menstrual or inter-menstrual bleeding must rest upon the physical findings, and the character of intra-uterine contents; hence, the pathological diagnosis can be made positively only by the use of microscope. In conclusion, I am urging on the practitioner the necessity and value of the microscopic examination in every case of anomalous bleeding except those occurring in the later months of pregnancy.

ARTERIAL HYPERTENSION*

VERNE S. CAVINESS, M.D., Raleigh

PHYSIOLOGY OF BLOOD PRESSURE

There are several factors which enter into the production of any blood pressure:

- 1—The heart beat
- 2—Resistance offered to the circulation in the blood vessels, especially in the arterioles and capillaries
- 3—The elasticity of the arteries
- 4—The volume of the circulating blood.

Given a normal heart, the resistance offered to the peripheral circulation by the arterioles and capillaries is the greatest factor in the production of blood pressure, normal or abnormal.

Blood pressure is easily influenced physiologically. Any change in posture will produce some change in it. Exercise, excitement, fear, anxiety, worry or any strong emotion will elevate the blood pressure temporarily, and may raise it to a great height.

Persons who have the so-called essential hypertension may get a rapid and extreme elevation of blood pressure from exertion and excitement. One of my patients had his blood pressure raised by having car trouble while making a hurry trip to meet an appointment, so that when seen two hours later there was still an elevation of 60 mm.

WHAT IS NORMAL BLOOD PRESSURE?

The systolic pressure probably varies widely normally. For several years I have considered any systolic blood pressure above 140 abnormal. Persons under forty years of age probably should never have a systolic blood pressure above 130. 120/80 is a normal pressure and it is doubtful if it should ever be higher over a prolonged period.

Life insurance statistics vary somewhat. The New England Mutual Life Insurance Company specifies 145 as the maximum normal systolic pressure; the Metropolitan specifies 142 as the maximum; the North Western Mutual specifies 135.

We have a number of factors which influence blood pressure other than age. Weight plays a considerable part. The greater the weight the greater the capillary area which must be supplied with blood and hence the greater the pressure that will be required. Climatic conditions play a part. Sex must also be considered. The general physical health, the type of arteries inherited, fatigue and the time of day, the position of the body, the time since eating, and even the general mental condition may affect a blood pressure reading. It varies constantly in the same person under different conditions to meet the demands of nature for more energy or for vital functions.

Moschowitz states: "What is a normal blood pressure either for the individual or the species has never been and never can be determined, because the pressure must vary according to the calls of the system for more or less free blood."

In general the diastolic pressure should be approximately two-thirds of the systolic pressure to give a pulse pressure of 50 per cent of the diastolic pressure. However, this is subject to wide variations as we shall see later.

Treatment of arterial hypertension has always been a failure. The reason for this is probably found in the lack of knowledge regarding the cause. A very prevalent and widely accepted theory of the cause is, that it is due to constriction of the capillaries in the glomeruli of the kidneys. Another theory is that it is due to chronic nephritis which prevents proper elimination of the toxic products of metabolism. Both of these theories are probably erroneous.

Many efforts have been made to classify arterial hypertension. The complexity of the classifications is due, at least in part, to a lack of knowledge regarding the subject. Possibly the most common classification is simple hypertension and essential hypertension. Another classification is functional hypertension and organic hypertension.

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There is probably not very much difference between these two classifications. Functional hypertension is practically the same as simple hypertension, and organic hypertension is more or less synonymous with essential hypertension. It is probable that the difference between simple and essential hypertension is one of degree, and that there is no distinct dividing line between them. Organic or essential hypertension probably begins as functional or simple hypertension, and gradually becomes aggravated into a supposedly incurable form.

CAUSES OF HIGH BLOOD PRESSURE

H. C. Anderson, in experimental work on rabbits, destroyed 65 per cent of the secreting tissue of one kidney and after the rabbit recovered from this operation removed the other kidney entirely. This gave a loss of approximately 82.5% of the total kidney tissue, and should represent a loss equivalent to a very chronic glomerulo-nephritis. The metabolites showed a definite increase in the blood. However, there was no rise in systolic blood pressure.

Three extremities can be removed, representing an enormous loss of capillary area and still show no increase in systolic pressure.

Normally, we have a sufficient elasticity of control of systolic blood pressure to permit large areas of arterioles to dilate or contract to control the flow of blood to different parts of the body. For example, after a heavy meal, the blood is directed to the splanchnic area and away from the skin, muscles, brain, etc. While running a race, the blood is diverted from the splanchnics to the muscles. This change can be so sudden and widespread as to produce death in shock by dilatation of all the arterioles and lowering the systolic blood pressure. In sclerosis of the peripheral vessels, the elasticity of control of the circulation is lost due to fibrous changes in the walls of the vessels.

It is very doubtful if the glomeruli could play any part in the determination of blood pressure when compared with such massive changes in vascular areas elsewhere in the body.

There are many theories regarding the causes of high blood pressure which must be considered:

1. *Persistent over-eating* appears in some cases to be a factor. However, it is probable that high blood pressure results from intestinal disturbances rather than from excessive food taking *per se*. Intestinal stasis is a great factor and is probably responsible for some cases of arterial hypertension.

2. *Excessive use of tobacco* is considered by some to be a cause. I doubt if it plays any part.

3. *Alcohol* probably plays no part whatever in the control of blood pressure.

Arterial hypertension is often present in habitual users of tobacco and alcohol, but it is probably solely concurrent. Caffeine in coffee, alcohol and the nicotine in tobacco raise blood pressure temporarily, but such a rise is probably never permanent. Like the increased pressure from mental work and strain, there is a tendency for the pressure to return to normal with rest and relaxation.

4. *Various intoxications* appear to produce arterial hypertension. Those chiefly seen are in workers in lead, mercury, and zinc. In these persons we get a rather marked arteriosclerosis which probably begins in the peripheral circulation. This is doubtless a similar condition to the arterial hypertension resulting from intestinal stasis, and that resulting from foci of infection of long standing.

5. *Focal infection* doubtless plays a part. However, removal of foci of infection does not give satisfactory cures. Doubtless infection makes the condition worse, but is probably never the primary cause.

All foci of infection, such as abscessed teeth, infected tonsils or an infected gall bladder, should be removed for hygienic reasons and to prevent an aggravation of the existing arterial hypertension.

6. *Obesity* is an endocrine disturbance. The patient who is obese and shows a low basal metabolic rate often has a high systolic blood pressure. However, the patient who has a pituitary deficiency often shows a sub-normal blood pressure. This is in keeping with the endocrine theories of the control of blood pressure. Since the pituitary is antagonistic to the thyroid it is probable that obesity does not cause a very high blood pressure, but that obesity is produced by the same endocrine disturbance which causes disturbances in blood pressure.

7. *The presence of "pressor substances"* in

the blood produces a generalized constriction of the arterioles or capillaries or both. This produces an increased resistance to the peripheral circulation.

8. *Hardening of the arterioles and capillaries.* This is ordinarily termed arterio-sclerosis of the peripheral vessels. It may be produced by a long continued action of pressor substances,—the nature of which is unknown. We feel sure that they are present, yet we do not know what they are, how they are formed or their mode of action. It is probable that they act by stimulating the vaso-constrictor center in the brain; there may also be a peripheral stimulation of the musculature of the small vessels. However, since a long-continued arterial hypertension is accompanied by arterio-sclerosis, and since this sclerosis apparently begins in the smaller vessels, we would assume that the action is primarily on the brain center, inasmuch as the brain center controls the smaller vessels rather than the large vessels. There is doubtless a very strong endocrine factor in the formation of these pressor substances.

Endocrine pressor substances may consist of an abnormal secretion of the thyroid or gonads, or they may be an over-secretion of the suprarenal glands which have lost the inhibition normally supplied by normal thyroid and gonads.

Englebach studied a group of 500 endocrine cases; all these showed a systolic pressure of 160 or more. However, he adds the comment that just what relation ductless glands bear to these types of hypertension cannot be determined.

Arterial hypertension is usually accompanied by a definite endocrine disturbance.

Addison first called attention to hypotension apparently resulting from deficient secretion of the suprarenal glands. Yet, attempts to raise pressure by administering the suprarenal extract have never been very satisfactory.

It is probable that the thyroid gland is antagonistic to the suprarenal glands. This has been an unproved theory for many years. More recently Plummer has noted an incidence of arterial hypertension in thyroidism. The gonads are synergistic to the thyroid and apparently have a considerable influence in determining blood pressure.

My attention was first directed toward the

endocrine aspects of arterial hypertension by a patient who came under my care several years ago. Both ovaries and the thyroid had been removed. Following this she had had no medical treatment. When I saw her she had a systolic blood pressure of 260. She had continuous headaches and very severe dizziness. Her basal metabolic rate was —30. Premature artificial menopause had followed the operation. I put her to bed for a few days and gave her substantial doses of thyroid and ovarian extract. There was a rapid reduction in blood pressure so that within a few weeks her pressure was practically normal and it remained normal as long as she remained under my care.

After about one year of treatment she left the State and stopped all treatment. About a year later, she returned to North Carolina and was very active in supervising the furnishing and arranging of a new home. When I saw her, she had had a cerebral hemorrhage and was unconscious. Her blood pressure was 280/120. She never regained consciousness.

Women are particularly likely to show a slight elevation of blood pressure with every menstruation and in normal pregnancy and menopause. In abnormal menopause, the blood pressure may vary from normal and reach a very high elevation. The same is true in pregnancy in which eclampsia develops. Eclampsia, however, is merely uremia occurring during the course of pregnancy. The first recognized symptom of eclampsia is high blood pressure. Uremia is a symptom of severe nephritis in which there is considerable toxic retention in the blood. Now, it does not matter what is the cause of high blood pressure so far as the kidneys are concerned. No patient can show a high blood pressure over a long period of time without developing renal damage; so whether the patient be a man, a non-pregnant woman or a pregnant woman the result is likely to be uremia.

In eclampsia, the blood pressure is high and there is a considerable blood retention of metabolites. In menstruation, menopause and pregnancy the ovaries are the endocrine glands which are most affected. An enlargement of the thyroid is frequent during menstruation in general and particularly during adolescence; an enlargement also occurs dur-

ing pregnancy. The thyroid is synergistic to the ovaries and its enlargement is probably contributory in these cases.

Polack states that, "A rise in blood pressure is almost always a forerunner of eclampsia and is the most important premonitory sign which precedes by many days the toxic picture in either blood or urine."

A great many women who present high blood pressure give a history of scanty menstruation, frequently of sterility, and of having been rather over-weight and of the endocrinopathic type as small children.

ARTERIO-SCLEROSIS

In a consideration of arterio-sclerosis, we must differentiate between sclerosis of the large vessels and sclerosis of the peripheral vessels. Tuberculosis apparently can give sclerosis of the large vessels, but this is rare. Just as we considered essential hypertension an advanced stage of simple hypertension, it is probable that we may sometimes consider arterio-sclerosis of the large vessels an advanced stage of arterio-sclerosis of the small vessels. Whenever we have arterio-sclerosis of the small vessels, we always have arterial hypertension, unless cardiac decompensation or some other condition prevents. However, whenever we find sclerosis of the large vessels, even though it be of the pipe-stem type, tortuous, and possibly locomotor arteries, the blood pressure may be high, low or normal. The condition of the large arteries does not appear to have any influence upon the systolic pressure.

Some diabetic and gouty patients, as well as some patients with syphilis, develop arterio-sclerosis and at times arterial hypertension, but it is probable that in these cases we have also an endocrine disturbance which is responsible for the arterio-sclerosis, the hypertension, and the obesity so often present in diabetes and gout.

Arterio-sclerosis of the smaller vessels causes arterial hypertension, and it is probable that long continued arterial hypertension will produce arterio-sclerosis of all the vessels. Sclerosis probably begins in the smaller arterioles and capillaries, and after a time may spread to the larger arteries.

RESULTS OF ARTERIO-SCLEROSIS

Arterial hypertension causes cardiac hypertrophy. If long continued, the condition pro-

gresses and under the excessive load, the myocardium weakens. The high pressure gives early renal damage. The glomeruli are designed for work at low pressure and when the pressure is raised to abnormally high limits, they are no more able to stand the increased pressure than the radiators in an office building could stand the steam pressure of a locomotive. Chronic glomerulo-nephritis is the inevitable result, due to sclerosis of the glomeruli along with the capillaries of the entire body.

If the hardening of the vessels continues and pressure remains high, the lenticulostriate artery of Charcot is usually the first to suffer, and apoplexy is listed as the primary cause of death. If the damage to the vessels be not so severe there may be a generalized hardening of the cerebral vessels resulting in a dementia. This may be present with no apparent sclerosis of the large vessels. If the pressure remains high, the weakening of the myocardium results in degeneration and cardiac decompensation necessarily follows.

THE BLOOD IN ARTERIAL HYPERTENSION

The blood picture in arterial hypertension depends entirely on the renal condition. If the kidneys have not been severely damaged, the blood may show a normal nitrogen content. When the kidneys have become damaged sufficiently to impair their function, the nitrogen retention increases in proportion to the impairment.

It is doubtful if renal insufficiency ever produces arterial hypertension. In support of this belief it is necessary only to study a few cases of prostatic hypertrophy with retention of urine. Such patients often show nephritis and if the condition be sufficiently severe there is an extremely high nitrogen retention in the blood. But the blood pressure is not elevated above the usual level for the individual patient. These patients, above all others, with their long continued, often massive, retention of waste products, could be expected to show arterial hypertension, were arterial hypertension due to impaired renal function.

TREATMENT

The important factor in the treatment of high blood pressure is its prevention. The prevention must begin in childhood. Whenever we see a small child who is fat and

pudge, answering to the description of Dick-en's fat boy, we are dealing with an endocrinopathic type of child. This is one type of child who later in life may develop arterial hypertension.

We must get away from the time honored fallacy that blood pressure should be 100 plus the age, and consider that any blood pressure above 120, 130 or 140 is distinctly pathological, and demands just as much care, consideration and study as a temperature above 100.

No physician would be likely to tell a patient that a temperature of 102 did not make any difference and was probably normal for that patient; yet many physicians tell a patient that a pressure of 150, 160 or 170 is normal and is not worthy of any consideration.

Remarkable progress has been made with fevers; but what about blood pressure? How much more do we know about blood pressure than the great physicians of a generation ago knew? True, we can make an accurate estimation of the amount of pressure and we can plot curves to show the relative variation due to the action of drugs, posture, exercise, etc., but what results are being obtained? The subject of blood pressure has not received the study that has been given to fever and other symptoms of disease. Until we secure more definite data regarding the cause, our treatment will remain unsatisfactory.

Patients who show a moderate elevation of blood pressure probably do not have very much, if any, arterio-sclerosis unless they have had a higher pressure and are suffering from circulatory decompensation. These patients can be benefited most. Their arteries have not become sclerosed but are merely under the influence of a toxic contraction which affects all the arterioles and capillaries of the body. At this time treatment is of the greatest value. Study and treat any endocrine disturbance which may be present; carefully remove all foci of infection and determine whether or not diabetes, gout or syphilis is present; eliminate any possible influence from mercury, lead or zinc intoxications, and a patient can be benefited and often cured. But if the warning signal is not heeded, and blood pressure is allowed to progress to a higher level and the arterioles be-

come sclerosed, nothing can ever cure the patient.

A great many patients who have a moderately low basal metabolic rate do not show much evidence of thyroid deficiency on physical examination. Many such patients show an elevation of the blood pressure.

From studies and observations made so far it appears that deficiencies of the thyroid and gonads are primarily responsible for arterial hypertension. It is probable that this type of case presents first hypertension, and then arterio-sclerosis. In the various intoxications, as from metals or infection, we probably get arterio-sclerosis first and hypertension follows.

Endocrine cases probably offer the best field in which to obtain good results. Supplying the endocrine deficiency seems to be the principal part of the treatment. I do not use any severe restrictions of diet. I pride myself on never using cardiac depressants and vaso-dilators. I have used some of them in the past but the results were far from satisfactory. I cannot get away from the fact that in any case of hypertension we have a physiological aberration.

If you had a horse that had pulled a heavy load all day long, and then got into a great mudhole in which the wheels mired up to the hubs, it would be useless to apply the whip. The heart is overloaded, frequently working to full capacity with no reserve. Most of the drugs ordinarily employed for the reduction of blood pressure depress the heart. This prevents the heart doing the work necessary to maintain life.

In arterio-sclerosis we are dealing with scar tissue which represents an effort on the part of nature to protect and repair injury just as truly as in the case of a skin burn. When dealing with a case of high blood pressure that is old and has progressed to the stage of arterio-sclerosis, the odds are too much against the patient. A return to normal is just as impossible as of scar tissue in the kidneys, skin or elsewhere.

It is unfortunate that we have so little actual information regarding the cause of high blood pressure. However, we may be certain that arterio-sclerosis is the essential factor. Before the development of arterio-sclerosis, a patient can be cured. While the vessels are becoming sclerosed, there is still

opportunity to cure or at least to benefit the patient to a great extent. After the vessels have become completely sclerosed it is probable that any lowering of the blood pressure is effected primarily by depressing the heart. It is impossible to secure a relaxation of a sclerosed arteriole or capillary, so the great factor in the treatment of arterial hyperten-

sion, regardless of the cause, consists in prevention of arterio-sclerosis.

While endocrinopathic cases predominate in arterial hypertension, we must watch for all foci of infection, all avenues for toxic absorption, worry, mental strain and anything else that could contribute to the process of hardening of the arteries.

CERVICITIS, ENDOCERVICITIS AND LEUCORRHEA*

ROBERT THRIFT FERGUSON, M.D., F.A.C.S., Charlotte

In presenting this subject to you I shall not attempt to bring anything particularly new but to outline and emphasize some of the outstanding principles and facts necessary to the accomplishment of a cure of these conditions.

A normal woman immediately becomes abnormal with the development of leucorrhea, whether it be a simple affair, an infectious process, or due to the development of some malignant condition. Unfortunately these patients do not apply to a physician for relief upon the first signs of trouble but wait for further developments; in the meantime they keep their ears to the ground when such matters are under discussion in their little groups and use the local means as gathered from gossip around the fireplace of a friend, and when they finally apply to us for relief the condition is usually in an advanced stage.

Cervicitis and endocervicitis will be discussed together, as they rarely occur separately for any considerable length of time, and certainly are twins by the time they apply to the gynecologist for relief. Non-specific infections of the cervix and its mucous membrane are generally the aftermath of lacerations and operative interventions that result in erosions or ectropion or both. Erosion of the cervix is sometimes seen in virgins and accounts for the persistent leucorrhea from which they oftentimes suffer. The

cause of this is not definitely known; the chances are, however, that it is due to some mechanical irritation, for the condition is most often seen where there is a malposition of the cervix so that it impinges on the anterior vaginal wall, or where the cervix is unusually long and produces friction against the posterior vaginal wall. Under certain conditions the secretions from the cervical glands become acid, and this of itself may cause a mild erosion and is frequently the cause of sterility, for the alkalinity of the cervical secretion is absolutely essential for the passage of the spermatozoon into the uterine cavity. There are certain inflammatory conditions in the pelvis which will produce a simple but distressing leucorrhea. Chief of these, in my experience, are malpositions of the uterus and diseased adnexa.

The common causes of cervicitis and endocervicitis are the staphylococcus, streptococcus and gonococcus. I have been surprised at the increasingly large number of bad leucorrrheas in virgins, and supposed virgins, that are due to either a staphylococcus or streptococcus infection, or to the two combined, which is the most common form seen outside of the Neisserian.

Infections in women and in men are more readily cured when tackled in the early stages. Neisserian infection is the most common cause of bad leucorrrheas, and this is increasingly common in both married and unmarried women. If the effects of these inflammatory conditions were limited to the

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

vagina, cervix, urethra, Skene's and Bartholin's glands, the prognosis and treatment would be much simpler. The gonococcus will nearly always find its way into the adnexa and this produces either a temporary or permanent crippling of the functions of these organs. The staphylococcus and streptococcus will sometimes do the same thing, especially post-partum; but as a rule they are not so inquisitive as their cousin the gonococcus, and are satisfied to remain *in statu quo*; but when it comes to the ultimate ambition of the three we might say *omnibus hoc vitium est*.

We are all familiar with the havoc that is wrought in the pelvis by extension of these infections, therefore a little education to direct the public in prevention, then early reporting for treatment, would be forward steps in preserving the pelvis for its normal functions.

I wish to call your attention to some salient features in the treatment of these conditions. The first and most important is that few cases can be cured, even the simple ones, under from two to six months, and many cases much longer than this. These cases cannot be dismissed with a simple douche and expect them to be cured. We see many cases that have been advised to take douches three times a day over long periods using either salt water, boric acid, soda, plain water, bichloride, lysol, creolin, permanganate of potash and all the known and unknown proprietary and patent remedies on the market, and the simple cases that would be relieved by a few douches are continued *ad infinitum* by the irritation produced by any foreign substance used in the vaginal canal over a long period of time. I have cured a great many more simple leucorrhoeas by discontinuing the douches they were taking than I have by advising their continuance or giving another in its place. The patient will stand aghast when you tell her to quit all douches and return to your office in ten days to two weeks, but she will be enthusiastic over the result at her next visit. It is a very common occurrence for a patient to come to your office and tell you that she has been taking douches three times a day for a year or longer. Of course you must have made the necessary examinations to satisfy yourself that it is really a simple leucorrhoea and not an infectious one.

There is only one way to get at the etiology of any case of cervicitis, endocervicitis or the concomitant leucorrhoea and that is by the use of smears and cultures, and these must often be repeated several times under varying conditions in intractable cases. It is exceedingly hard to demonstrate the gonococcus in any case of more than a year's standing, but the history in most of these cases is sufficient and the treatment is practically the same. I do not depend on smears or cultures alone but on both.

An interesting study in these cases, especially the Neisserian infections, is the tubal patency test devised by Rubin¹ and modified and simplified by the writer.² Many of these cases in the early stages will show non-patent tubes and when the patient is cured patency is re-established. Every now and then some writer goes into ecstasies over this test, saying that it is unscientific, unnecessary and dangerous, when in fact there is practically no danger, and in several hundred cases done in my office, and a large number reported by other men who have used my apparatus, there has not been a single untoward result reported. I sometimes feel that men occasionally write about subjects with which they are not wholly familiar, and about apparatus which they have not used or have used unwittingly. This test has been worth more to me in my pelvic diagnoses than any other one thing that I have ever used. There are many patients who come complaining of indefinite pelvic symptoms; physical examination by other means reveals nothing, whereas this test will disclose a pair of non-patent tubes which are adherent and which could not possibly be diagnosed by any other known means. I wish to state quite frankly that there are many cases in which I cannot palpate the fallopian tubes, the opinions of other gynecologists to the contrary notwithstanding.

In a large number of operations for plastic work on the tubes, where this instrument said they were non-patent I have yet to see the first case which was not correctly interpreted. I have become very enthusiastic over its use since it tells so much and causes the patient practically no discomfort and is in no way dangerous.

In taking up the treatment of these conditions I wish to state that the use of douches alone is always very unsatisfactory, usually

prolonged, and often results in failure to accomplish the desired end.

The treatment is necessarily varied to meet the conditions which confront you in a given case as to whether it is a simple leucorrhea, an infectious one, one that occurs on a virgin field or one that occurs with a lacerated cervix. I shall discuss here only the remedies that I am using at present, and which are so satisfactory, and will not tire you with a description of numerous remedies with which you are all familiar and which might give equal results in your hands.

The simple cases are treated with local applications and astringent douches and are quickly relieved. The infectious cases are treated with stronger local applications and more astringent douches until the trouble is localized in the glands of the cervix, and neighboring glands, when use is made of the electric cautery to destroy the glandular tissue. This latter instrument is the most valuable means of eradicating the trouble that I have ever seen when used at the proper stage. In the cases that occur on old lacerations, in addition to the foregoing treatment, operation under general anesthesia must be the final resort to make a finished job and restore the cervix to its normal condition. The choice of operative procedure will have to depend on the individual case and you will be called on to do either a Sturmdorf a Schroeder operation, or some modification of these to get rid of the infected glandular and scar tissue. The complete cure depends entirely on ridding the field of all the infected tissue either by use of the cautery or operation or both. In this way only is it possible to get results, and unless one is willing to spend much time and give his personal attention to each case and not leave it in the hands of an office assistant he may not expect to get relief from symptoms.

The preparations I prefer to use locally are the various silver salts, preferably argyrol in twenty-five per cent solution or protargol twenty to thirty per cent, and mercurochrome

one per cent in equal parts of lanolin and vaselin. It is remarkable what can be accomplished with electric cautery in your office without the aid of an anesthetic, and with very little discomfort to your patient. For the astringent douches I prefer a freshly prepared solution of Condy's fluid and normal salt or boric acid solution for the cleansing douches. One of the main considerations in the treatment of these cases is cleanliness before your treatments, cleanliness following your treatments and having a perfectly dry surface upon which to make your local applications. The result of treatment will depend largely upon this latter condition, which is brought about by the use of a large rubber bulb. All of my patients are instructed to use small pledgets of absorbent cotton in the mouth of the vagina separating slightly the labia, to take care of the secretions and to take place of the napkin which is very irritating when worn for any length of time. Another advantage of the cotton pledget is that it can be changed frequently and the patient is not aware of its presence. This will also prevent a vulvitis which frequently occurs where the discharge is rubbed into the tissues from wearing the ordinary napkin.

Operations on the cervix are very unsatisfactory until you have gotten rid of the infection, after this you may expect, and will get, perfect union of the surface.

There is no more grateful patient than the one whom you have relieved of a distressing leucorrhea, for this symptom plays on the mind like a harp with a thousand strings and all of them out of tune.

Professional Building.

REFERENCES

1. Jour. A.M.A., 75:661, Sept. 4th., 1920. Am. Jour. Roents. 8:120, March 1921; *ibid.* 8:459 Aug. 1921.
2. Ferguson Apparatus For Testing Patency Of Fallopian Tubes, Surgery, Gyn. & Obs. 39:831 Dec. 1924.
3. Jour. A.M.A., Vol. 84, No. 5 Jan. 31, 1925. Testing Patency of Fallopian Tubes Southern Med. & Surgery, Charlotte, N. C., April 1925. Detailed Description Ferguson Tubal Patency Test.



THE USE OF IODINE IN GOITRE*

WILLIAM BANKS DEWAR, M.D., Raleigh

In presenting this paper to the medical section of the State Society, I have been stimulated—first, by an increase of goitre in many parts of our State. Second—by a general misunderstanding of the various types of goitre. Third—by a general belief among the public and many physicians that iodine is a cure for goitre.

For many years iodine has been used as a therapeutic agent in goitre cases. The first authentic account of its use occurred sixty years ago, when a beloved physician of Paris, by the name of Trousseau, accidentally discovered that it was of value in exophthalmic goitre. As the story goes, a young lady with a severe exophthalmic goitre consulted him and by mistake he wrote tincture of iodine for tincture of digitalis, and twenty drops were taken for some days. The patient returned in about two weeks, much improved, with a remarkable decrease in the rate of her heart. Finding his mistake, Trousseau then gave her tincture of digitalis. After a few days she became much worse. He then again prescribed iodine and improvement promptly followed. Since that time iodine has been used in goitre cases.

It has been difficult to interpret the effect of iodine in these cases, until a relatively short time ago:

First—Because of the failure to realize that there are several different types of goitre, and

Second—Because of lack of well organized clinics, with proper follow-up systems.

According to Plummer, goitre should be classified as follows:

First—Colloid goitre;

Second—Adenomatous goitre without hyperthyroidism;

Third—Adenomatous goitre with hyperthyroidism;

Fourth—Exophthalmic goitre;

Fifth—Thyroiditis;

Sixth—Cretinism;

Seventh—Myxedema;

Eighth—Malignant disease of the thyroid gland.

Only the first four of these are of interest so far as iodine is concerned. A differential diagnosis of each will be taken up, briefly in its place.

For years iodine and its derivatives have been given to patients with normal thyroids and no ill-effects have ever been noticed. In fact some of our western physicians have gone so far as to make a thorough study of iodine in normal school children, and advise its use in school children as a preventive of goitre. In individuals with normal thyroids this does no harm, but its administration to thyroid cases routinely is most inadvisable, as will be shown later.

The so-called colloid goitre, which is not at all uncommon at adolescence and the few years following, is our first consideration. The thyroid gland is generally symmetrically enlarged in this condition, due to a storage of an abnormal amount of colloid in the normal vesicles. No nodules can be palpated. It is much more frequent in females than in males. There are no toxic symptoms present such as tachycardia, palpitation, extreme nervousness, etc. The basal metabolic rate is usually slightly subnormal.

Plummer, who is an authority on iodine in goitre, believes a colloid goitre to be probably a compensatory enlargement of the thyroid gland in its attempt to secrete more normal thyroid secretion, and in view of this opinion he advises small doses of thyroid extract. In cases of simple colloid goitre in which one can be sure that there are no adenomatous nodules present, iodine can be safely and effectively used. However, it is often without good results. Simple colloid goitre in the United States usually disappears by the twenty-fifth year.

Adenomatous goitre without hyperthyroidism usually occurs between the eighteenth and thirtieth year, although it may occur at any age. The gland is usually asymmetri-

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cally enlarged and definite nodules may be palpated. There are no toxic symptoms present and the basal metabolic rate is normal. Adenomatous goitre usually has its inception in colloid goitre. Some authorities believe that any enlarged thyroid after the twentieth year has adenomatous nodules in it. These nodules are formed by an abnormal increase in new acini. In this type of goitre iodine is positively contraindicated, for when simple adenomatous goitres are given iodine over a long period of time, they become adenomatous goitres with hyperthyroidism.

It is very probable that people who have had simple adenomatous goitres without hyperthyroidism which now have become adenomatous goitres with hyperthyroidism, have been made hyperthyroid by an increase of iodine intake in the water or diet. Recently I have seen three cases of simple adenomatous goitre without hyperthyroidism made adenomatous goitres with hyperthyroidism by prolonged iodine administrations. Adenomatous goitre with hyperthyroidism has, in addition to the characteristics of simple adenomatous goitre, toxic symptoms, such as tachycardia, tremors, palpitation, nervousness, etc., and an increased metabolic rate. It is rare before the twenty-fifth year, and is simply a late stage of many simple adenomatous goitres. There is never an exophthalmos present in this disease. In adenomatous goitres with hyperthyroidism, iodine has little or no effect when given over a period of two to four weeks. It should certainly not be given over a period of time because of the possibility of increasing the metabolic rate.

Now in exophthalmic goitre the use of iodine is a most sane and rational therapy. Plummer, again was the first to establish definitely the value of iodine in cases of exophthalmic goitre and as a measure for reducing the peculiar operative risks in this disease. For many years surgeons have realized that it was dangerous to operate on severe cases of exophthalmic goitre, because of increased toxicity and the crises after operation. It has been definitely proven that iodine, if given in sufficient amount, will bring these patients out of precarious conditions before operation, and will prevent crises to a large extent after operation.

With the use of iodine in exophthalmic goitre, the mortality has been reduced to a

negligible point, in the hands of experienced surgeons. The theory of iodine in this disease, as explained at the Mayo Clinic, is as follows: The disease is not simply a hyperthyroidism, it is a hyperthyroidism plus a disthyroidism. The exophthalmos is caused by an abnormal thyroid secretion and not simply an over-secretion of normal thyroid. Exophthalmic goitre is present some weeks before the exophthalmos is evident. This disease is practically always associated with a hyperthyroidism, but in rare cases there may be an exophthalmic goitre and a hypothyroidism. If the normal thyroid molecule is represented by a square, then the secretion in exophthalmic goitre is the square, minus a small corner. When iodine is given it makes this abnormal thyroid molecule normal, by adding this small insufficient corner, and in doing this indirectly decreases the metabolic rate, toxicity, tachycardia, nervousness, etc. All of us have seen severe exophthalmic cases remarkably improved and the metabolic rate reduced after a few days of iodine administration. At this stage these cases can be operated on with practically no mortality. If the symptoms reappear after operation, the iodine should be increased; ten minims of Lugol's solution four times a day for ten days, with rest in bed, makes these patients much better operative risks. In severe cases large doses should be given.

It is remarkable to see the cases of severe exophthalmic goitre before and after iodine administration. The severe cases with almost choreiform movements, will be quiet and calm after a few days of iodine medication. It has been shown that these cases may be made to return to their original choreiform movements by simply leaving off the iodine. Iodine is not claimed as a cure in exophthalmic goitre. It may be given in grape juice and as a rule forty minims daily is sufficient, except in severe cases. In cases with nausea and crises of cerebral, or gastro-intestinal type it should be given by rectum, in dosage sufficient to control symptoms. It must be said that these types of goitre are often mixed, and a definite classification is difficult. Exophthalmic goitre and adenomatous goitre with hyperthyroidism are often difficult to differentiate. A therapeutic test with iodine is helpful. The exophthalmic is distinctly improved under iodine, while there is no ap-

predictable improvement in adenomatous goitre with hyperthyroidism.

TO SUMMARIZE:

First—The indiscriminate use of iodine in goitre cases has done more harm than good.

Second—Iodine may be used in school children who have no goitre, with safety and perhaps some good as a preventive.

Third—In colloid goitre, without adenoma, it may be used with safety; however, small doses of thyroid extract with proper basal metabolic rate study is better.

Fourth—In adenomatous goitre without

hyperthyroidism it is positively contraindicated because of producing adenomatous goitre with hyperthyroidism.

Fifth—In adenomatous goitre with hyperthyroidism it is of no value and should not be used over a long period of time because of producing an increased hyperthyroidism.

Sixth—In exophthalmic goitre, iodine in sufficient amount will control the gastric and intestinal crises before and after operation, and in the hands of competent surgeons reduces the surgical mortality to the point where it is negligible.

CAN WE IMPROVE ON NATURE IN OBSTETRICS: WHEN AND HOW?*

GEORGE H. ROSS, M.D., Durham

We have so often heard the phrase expressed: "Let nature take her course" that we have become almost skeptical concerning advancement in obstetrics. We have so often heard labor spoken of as a normal function that we have almost allowed ourselves to believe it so to be. We hardly think of labor as a disease, and yet it is a decided pathologic process. Everything of course depends on what we define as normal. Dr. Jos. B. De Lee, of Chicago, says: "If a woman falls on a pitchfork and drives the handle through her perineum, we call that pathologic—abnormal, but if a large baby is driven through the pelvic floor, we say that it is natural, and being natural that it is normal. If a baby caught its head in a door very lightly, but sufficient to cause cerebral hemorrhage we would say that it is pathologic, but were that baby's head crushed against a tight pelvic floor, and a hemorrhage in the brain kill it, we call this normal, the function we would say was natural, not pathogenic. In both cases the pitchfork and the door, the damage is pathogenic, disease producing, and in the

same sense labor is pathogenic, disease producing, and anything pathogenic is pathologic or abnormal." But you will say the function of labor is normal, and only those cases resulting in disease are abnormal. Labor in nature's intention should be normal, but nature's intention is not conclusive as to nature's result. It sometimes seems that nature intended that womankind should be used up in the process of reproduction, in a manner analogous to that of the salmon, which dies after spawning. Perchance laceration, prolapse and all the evils soon to be mentioned are, in fact, natural to labor and therefore normal. If you adopt this view, I have no ground on which to stand, if, however, you believe a woman should be as anatomically perfect after delivery as before, and that the child should be undamaged, then you will have to agree that labor is pathogenic, because experience has proved these ideal results are of rare occurrence.

Granted that Mother Nature's methods are in the main correct, we must necessarily admit they are far from perfection, when we consider the fact that a small minority escape from damage during labor, while 4 per cent of the babies are killed and a larger

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indeterminate number are more or less injured by the direct action of the natural process itself. These natural functions are becoming more or less inefficient in meeting the exigencies of labor as our civilization changes in progression. There are tasks which she could once accomplish unaided that now need and demand our professional assistance. If we admit our inability to assist her in these labors, we should relinquish our hold and deliver the task completely to the midwife.

It is not my purpose in these few minutes to undertake any elaborate discussion of scientific surgical methods in obstetrics, but rather to possibly clarify in the mind of the general practitioner some essential necessities as to *when and how we can improve on nature in obstetrics*.

Permit me to suggest the three general periods as to when we can effect improvement or render aid to nature in her tasks, namely: first, pregnancy; second, labor; third, puerperium.

In this first period there are so many factors that are pathogenic—or disease producing; factors that are so dangerous and threaten both the prospective mother and the expected offspring from the period of conception, that nature begins to make evident her inability to handle the case alone. Here the parturient pilgrim sets out upon a path as difficult and devious as that trod by Bunyan's celebrated travelers. During the first trimester the obstetrician has a two fold mission of major proportions in helping nature. One is combatting the discouragingly obstinate and sometimes fatal early nausea and vomiting. This often tries one's resourcefulness. At times it grows so pernicious that we have to interrupt the natural process to save life. The other difficulty is the possibility of miscarriage and abortion. The middle trimester is simply one of stock taking, so to speak, the road is smoother than in the first trimester. Nature needs us here as watchmen, keeping down the weight and getting the system in good repair for the next long climb with its final steep pull. The upgrade of the last trimester is the most trying. A weak myocardium may show signs of weakening on the ascent; kidneys tend to go bad. Paradoxically the lungs do not stand the rarefied air and latent lesions spring into activity.

The carbohydrate storehouse in the liver may become depleted. The two feared dangers here are hemorrhage and late toxemia, these nature, unaided, cannot overcome. Woe to the watchman who is asleep to the danger signal of these two catastrophes. Many travelers succumb to these two insidious blights. We must help nature here and heed her warnings; *placenta previa* and premature separation cannot be trifled with. Kidney and liver breakdowns cannot be left to nature. We must not be lulled to sleep by the supposed "natural rise in blood pressure," the familiar sentence, "all women show a trace of albumen," or the sensuous strain which justifies bleeding as nature's handiwork. We must be alert and investigate thoroughly. Take frequent soundings and chart out all the hidden rocks and dangers. The wise master knows that nature is a fickle mistress.

Now comes the last long pull. Sometimes nature does not pull the occult trigger and we have to induce labor. Once it begins we must stick by our companion. The guide has to take the traveler by the hand, so to speak, and lead along the way. He is on 24-hour duty, ever watchful and ever wakeful. In time of storm the captain must walk the bridge at night, and so it is here. We must not be content to leave nature to herself. However, watchful waiting is often better than meddlesome interference. The obstetrician knows when to, and, equally import, when not to. This is the difference between a physician and a midwife.

Coming to the second period, labor, there are three distinct stages when improvement can be made on nature's way. Here we see the culmination of all our efforts. Here is an exact proving ground. The results are translated not only in terms of life and death of mother and child, but what is equally as important in terms of morbidity. The word obstetrician means literally—"one who stands in front of;" but we should not personify the word. A spectator is not needed, but a wise practitioner. It is our function to hold out a helping hand and equally our duty to see that it is a strong hand that is offered. When labor begins we must begin work. The preparation of the patient is most important. Nature will not do this for us. We must see that she is cleansed, shaved and the bowels

evacuated. Everything must be in order—we must be cognizant of her exact condition so that the abnormal will be recognized should it develop. Our chief duty is to put the patient's mind at ease—a sympathetic attitude is most gratefully received. Nature seldom blesses her, nervous creatures with refreshing sleep and we must help out by the exhibition of some drug; analgesia bodily and psychic is the keynote of the first stage. The fetus requires some attention. The heart sounds and position noted, often it is possible to improve on the position of the child by manipulations.

In viewing the second stage of labor we are gazing at a much fought-over battlefield. Here we find the radicals and conservatives, modernists and fundamentalists. The fact that there is so much discussion and difference of opinion proves that things in this stage are not as they should be. Here is an unsettled issue. Here is one time we do not leave things to nature. If we so much as give a hypodermic or a whiff of ether we are helping and improving on nature here. We should here carefully consider the anesthesia most appropriate to the case. Some have ideal conditions for the "twilight sleep" narcosis; some stick to inhalation anesthesia. The most satisfactory recent addition is probably the Gwathmey rectal instillation method, though sacral block finds many enthusiasts. All methods should be known and used as the need occurs, the proper anesthetic at the proper time.

Often there is a real necessity for mechanical aid; nature has made the demand and the ingenuity of man's mind has met this demand. From the original Chamberlen down to the present time forceps have been made and perfected until we now have a special one for every emergency or contingency, with great relief to the mother and no harm to the child. DeLee is the wise and reasonable exponent of prophylactic forceps. Podalic version has recently become popular, chiefly through the activity of the virile Potter of Buffalo. He has two operations, version and cesarean section, and has very accurate data to substantiate his ideas. We may use pituitrin in a limited number of cases, realizing that it may produce disaster if we use it unwisely. Then we have the ancient method of hysterotomy. This, like other

methods, is capable of great abuse. The low cervical cesarean as advocated by DeLee is the most noteworthy advance recently. Nature cannot duplicate any of these methods. Though we sometimes see spontaneous version, occasionally we find nature attempting a spontaneous cesarean section with rupture of the uterus resulting. The forces of nature are irresistible and we should take lessons from the other scientists and properly direct her activity.

During the second stage we can be of great help to the child as frequent auscultation reveals the condition of the fetal circulation. The passage of meconium into the amniotic fluid, except breach deliveries is of significance. Nature is giving danger signals and the wise will heed and give a helping hand. Breech and unusual presentations require additional aid to preserve the life of the child and the health of the mother. In the actual delivery of a normal case there are many details that should be learned to save the mother pain, the child from injury and the perineum from tearing. Resuscitation is an institution established by man and an important one.

Nature still needs us in the third stage to assist her. Any farmer or veterinarian will tell you that animals do not always throw off the afterbirth. All of us have had cases where it was an impossibility to get rid of the placenta without manual and even operative aid. We must help nature with adherent and retained placenta and the more uncommon *placenta accreta*. Probably the one thing that throws fear and dread into our hearts is hemorrhage, that nightmare of all obstetricians. No matter how ardent a nature lover a man is, he is grateful for all the outside aid possible in such serious emergencies. At the present time we all recognize and treat lacerations. We no longer deliver women under a sheet. Nor can we hide our heads and say we do not get tears, simply because we do not look for them. Nature does not repair lacerations. Most of us recognize the condition of obstetrical shock, pyramided on pain, hemorrhage and prolonged labor. This requires prompt and efficient treatment.

Even when labor is over and we have seen mother and child through the trials and dangers of this event, our task has not been com-

pleted. Today we hear more and more of the importance of the postnatal clinic. The trustworthy physician will not discharge his patient until she is in *status quo ante* or as near so as is humanly possible. By the simple use of the knee chest posture and having the patient lie on her abdomen we can reduce the occurrence of *vetro* displacements very appreciably. The care of the breasts and the problem of infant feeding demand our attention and require our aid. At the present time a competent obstetrician is indispensable. We see need and possibilities for him everywhere. We are not here to displace nature or to doubt her, but rather to study, learn, understand and assist her. The crux of this discourse is in the search for, not what nature

can endure, but what she can accomplish and how we can improve on her in rendering assistance when nature's methods are unable to accomplish her purpose. For experience, if it has taught us anything, has indelibly impressed upon us this lesson. That to allow nature to follow her course unaided means in a good number of cases to let the grim reaper take his toll.

Let nature take her course? Let brutal nature, whose fundamental doctrine is the survival of the fittest, turn back the wheels of human progress a million years to the age of our cavemen ancestry? Such a theory is against the fundamental conception of medicine, and all the other fine things in our civilization.

LATERAL SINUS PHLEBITIS

Report of Two Cases

V. K. HART, M.D., Statesville

One is always prone to talk about his successes. Much additional information would be forthcoming from the profession if failures were as glibly discussed. Sometimes it takes courage to do this because of the fear of censure for errors of commission or omission in the medical or surgical handling of the case.

The subject matter herein discussed concerns two cases of lateral sinus phlebitis complicating an acute mastoiditis which recently came under the writer's care, and which terminated fatally despite all life saving measures. Such measures, though heroic, were of no avail and, therefore, the cases may be viewed in the above mentioned sense.

Of course, all patients cannot be saved. The cases are not presented simply because of lethal termination. There are some interesting findings well worth consideration.

THERAPEUTIC AND CLINICAL COURSE WITH LABORATORY FINDINGS.

The first patient, a woman of forty-nine years, first came under observation March 16, 1926. Her chief complaint was a discharging

right ear. The history gave nothing of value except that both ears had discharged some years ago. The right ear had again begun to discharge within the last few days.

The physical examination gave positive findings only as concerned the ears, nose and throat. The right canal was filled with pus with a perforation in the posterior drum. The left canal was negative, but the drum was scarred and retracted. The nose showed some evidence of chronic catarrhal ethmoiditis. The throat contained a small atrophic pair of tonsils.

The right drum was at once widely opened posteriorly under local anesthesia and the patient sent home on irrigations to be followed by alcohol and boric drops. She was seen again on March 1st at which time her progress was satisfactory.

On the night of April 6th she came to the hospital seeking relief from intense pain in and about the ear. An examination disclosed that the drainage from the middle ear had entirely stopped. Apparently the drum had healed. She had extensive tenderness over

the mastoid cortex, much more marked over the tip. It was also found on questioning her that she had followed the advice of one of her good neighbors, and sometime a short while previously had put a poultice over the mastoid. This, of course, was done without consulting any doctor.

In view of these facts it was not considered safe to wait, and after consultation with her family doctor immediate operation was chosen as the safest course for the patient. A right mastoidectomy was done on the morning of April 7th. At the time of operation no wide spread bony necrosis was found. There was a sero-sanguineous fluid contained in the cells. A small area of the lateral sinus was exposed towards the knee. The wound was closed leaving ample drainage by means of one iodoform pack through the inferior angle.

She did as well postoperatively for the first two weeks as the average case. It is true there was a great deal of discharge from the ear and posterior wound. The middle ear became dry but the posterior wound continued to suppurate. She was discharged from the hospital on the twelfth day.

Two days later she was seen at her home because of a high temperature. This was 103 degrees (mouth) and she complained of tenderness along the inner aspect of the upper tibia. (This area never became reddened or swollen. The place was later opened but no pus obtained.) The writer was at once very apprehensive but felt that possibly the temperature was due to absorption from the mastoid. For the next two days she ran a high afternoon temperature. There were no frank chills as far as could be determined.

She was readmitted to the hospital for study on April 23, 1926. At this time a blood smear for malaria was negative. Her white blood count was 20,000, polymorphonuclears 84 per cent. A blood culture was at once taken. A catheterized specimen of urine showed only an occasional pus cell, no casts and was negative for albumin and sugar.

The white count on the 24th was 12,900 and on the 25th 15,300. These were taken when the temperature was elevated.

On the evening of the 26th of April the patient had a frank chill and the temperature went to 103 degrees (mouth). The afternoon temperature had been hovering about

102 degrees (mouth). In view of the clinical course and particularly the chill and temperature, an operation was decided as best for the patient's interests. This decision was reached despite the fact that the blood culture was negative.

She was operated a second time on the evening of April 27th. At this time the whole of the lateral sinus was exposed from the jugular bulb to the knee. The wall of the sinus was much reddened and covered with granulation tissue. The dura of the sinus, however, seemed normal just posterior to the upper angle of the mastoid. A hypodermic needle was inserted into the sinus and blood withdrawn; i. e., there was not an extensive thrombosis.

However, it was not felt that it was safe to stop the operation with such free exposure of the sinus because there had been only one negative blood culture. Such a negative blood culture did not necessarily rule out a blood stream infection. Furthermore, the pathology of the dura over the sinus was so obvious that it was considered best to obliterate the sinus and ligate the internal jugular vein.

With this end in view one pack of iodoform gauze, width one-quarter inch was placed between the bone and the dura at the upper angle, and a similar pack between the bone and the dura at the lower angle. The sinus was then opened, whereupon free bleeding ensued by reason of which it was necessary to pack rapidly with a third iodoform pack into the and against the sinus. The wound was carefully dressed with a sterile dressing, no closure being attempted. The internal jugular was then ligated by double ligature of number two chromic catgut opposite the bifurcation of the carotid and the wound closed with one rubber drain.

The patient stood the operation very well, the work being done under general anesthesia. She did very well for the next forty-eight hours, the highest temperature being 101.6 degrees (mouth). At this time her temperature went to 103.8 degrees (mouth) but was normal the following morning. The following afternoon she again ran a temperature of 102 degrees (axillary).

At this time it was considered advisable to give her a blood transfusion with the idea of increasing her immunity to a blood stream infection. By both grouping and cross

agglutination the husband was found to be a suitable donor and she was given 300 c.c. of citrated blood.

From this point on she began to do very poorly. It is believed that this would have been her course regardless of her transfusion; viz., that the transfusion did not bring about her turn for the worse, although it is not uncommon to get a reaction following a transfusion. Her temperature remained more or less constantly elevated. It was down to 99.8 degrees (mouth) the morning following her transfusion. For the next seventy-two hours the lowest temperature recorded was 99.8 degrees (axillary) and most of the time the temperature hung between 102 and 103 degrees (axillary). Coincident with her elevated temperature she developed a restless delirium. Her white count on May 30, 1926 was 18,300.

The pulse remained remarkably good up until twenty-four hours preceding her death. It stayed between 80 and 90. Just prior to death it mounted very rapidly. The end occurred on the evening of May 3rd, six days after her second operation.

Everything possible was done to save this woman's life. Quantities of fluid were given by mouth, hypodermoclysis and by rectum. She was digitalized immediately after the second operation. Sponge baths were freely used to reduce the temperature. However, the result seemed inevitable.

Immediately after death, a spinal puncture was done. This had not been done previously because the writer did not want his patient to suffer unnecessarily inasmuch as she had already suffered so greatly. The cell count was 1,350 per cubic mm., lymphocytes predominating, globulin was present and a smear from a centrifuged specimen showed a great number of short-chained streptococci.

The second case was seen on July 5th. She was a child ten years of age who had been taken sick two days previously with an earache. Shortly after the drum had ruptured.

When first seen the girl was obviously ill. Her temperature was 101 $\frac{1}{5}$ (mouth). There was an opening in the drum which was widened under local anesthesia. Much mastoid pain and tenderness was present. The x-ray showed rather diffuse involvement.

Cultures showed numerous gram-positive organisms reported by the laboratory as

streptococci, pneumococci, and staphylococci. A culture of the pus at operation showed the same organisms; i. e., gram-positive organisms arranged in groups, chains and pairs. These latter were probably streptococci. Later positive blood cultures which were unquestionably streptococci occurred in chains of twenty-five to fifty organisms. It is to be remembered it is very difficult to distinguish sometimes between pneumococcus and streptococcus of the short-chained type. The capsule of the former does not show often on laboratory cultures. It is readily seen on smears from animal tissues.

Digression has occurred. To return to the patient. An ice-bag was placed on the mastoid and the patient listed for operation the next morning. The afternoon of admission, however, her temperature rose to 105 degrees (mouth).

Immediate operation was decided. Diffuse suppuration of the mastoid was found as well as a large perisinus abscess. The lateral sinus was freely uncovered as this is the approved surgical procedure in this condition.

The next day, the fourth day of her illness and first post-operative day, her temperature went to 106 degrees (mouth). She was rational but there was some evidence of meningeal irritation. A blood culture was at once taken. She continued to run a high afternoon temperature for the next two days preceded by chills. A spinal puncture showed 384 cells, a mixture of lymphocytes and polymorphonuclears. Culture of the fluid was sterile, and a smear from a centrifuged specimen showed no organisms. Therefore, the process was localized (circumscribed meningitis, probably serous type).

She was again operated, this time under local anesthesia. The dura of the temporal lobe, middle fossa, and part of the posterior fossa was uncovered. In other words the inflamed dura was exposed and bone was removed as far as possible until dura of a normal color was found. There was no evidence of a brain abscess. After this procedure all meningeal symptoms promptly disappeared. The next day the blood culture was reported as positive for streptococcus, non-hemolytic. She was again immediately operated under local anesthesia. The sinus was opened and a large clot found. The incision was continued posteriorly until free

bleeding occurred.

Iodoform packs were very gently inserted as in the previous case. A sterile dressing was applied leaving the wound open. At the same time the internal jugular vein was ligated and severed below the facial. This vein was treated in like manner.

The fight was now against a streptococcic septicemia. The first blood culture was taken on the fourth day of her illness. A second was taken on the fifth day. This was reported as positive for streptococcus and staphylococcus. The latter may or may not have been a contamination. A third culture was taken on the seventh day. This was also positive for streptococcus of the non-hemolytic type. A culture taken seventy-two hours after the internal jugular vein had been ligated was still positive for streptococcus. Using the same technique a control blood culture was taken from a student nurse. This was sterile.

The patient did very well after her last operation. A small blood transfusion of 110 c.c. citrated blood was given. The same general measures as in the preceding case were used.

It is important to remember that a high caloric intake is essential in a septicemia. She took about 3000 c.c. of fluids in twenty-four hours containing nearly 3000 calories. Her septic temperature with chills continued but she was entirely rational and all meningeal symptoms were absent. Indeed, she was clear mentally until one-half hour prior to death which occurred one week after her last operation.

Three days prior to death a second transfusion of 150 c.c. of citrated blood was given. Twenty c.c. of a one per cent mercurochrome were also given intravenously. There was little reaction and little effect on the temperature.

Gentian violet is supposed to be more specific for gram-positive organisms. Therefore, thirty-two hours before death 20 c.c. of one per cent solution of the same was given intravenously. There was very little reaction and the temperature tended to seek a lower level after administration.

About this time, however, she began to vomit. The abdomen showed marked distention but no rigidity. The nausea was excessive, nothing being retained by mouth, but

the vomitus was not definitely fecal. Such findings were interpreted as a paralytic ileus due to toxemia. Moreover, it is believed that the patient would have had a chance for recovery without this abdominal complication.

A word as to the mastoid and neck wounds. Both remained quite clean until death.

The blood count varied from 14,000 to 34,000. The latter count occurred at the height of her meningeal involvement. After free exposure of the dura the count fell to 14,000. On admission it was 21,000.

DISCUSSION

There is a real lesson to be learned from the first case. This comes from a careful study of the blood cultures. The one prior to operation was negative. All were taken at the height of temperature, three post-operatively. The blood taken from the sinus at the time of operation was negative. Three other blood cultures were negative. It would seem, then, that an actual blood stream infection was improbable though not absolutely ruled out. The great majority of positive blood cultures reported in such cases are streptococci although occasionally staphylococcus and pneumococcus are reported.

The writer had seen two other cases. These were seen while on the service of L. W. Dean. In one case a number of positive blood cultures were obtained. Death followed because the trouble was bilateral. The other case recovered following operation and as remembered the blood culture was negative.

The term phlebitis is used because thrombosis if it occurs is secondary to the same. Was this the correct diagnosis in the first case with five negative blood cultures staring at one from the patient's record? The answer is, yes.

It is true that the immediate cause of death was probably a terminal diffuse pachymeningitis. This surely was terminal because the vast majority of cases of streptococcic meningitis never live more than forty-eight or seventy-two hours. She certainly did not have this, then, in the early stages of her illness. Furthermore, her clinical course in no way suggested it inasmuch as she was rational up until the last three days of her illness. It must be remembered, too, that a meningitis may be the terminal stage of a septicemia.

Kerrison makes a distinction between an

internal phlebitis and external phlebitis. In other words the patient can have symptoms of a lateral sinus phlebitis with involvement of only the outer coats. When the infection reaches the intima, actual blood stream infection and thrombosis occur. In the meantime, however, the patient is absorbing toxins from the sinus with clinical evidence of a phlebitis or thrombosis. Evidently the patient discussed had a *phlebitis externa* because the blood culture remained negative.

At the time of operation the writer sincerely believed that he was giving the patient the only chance she had for life in packing off the sinus and ligating the internal jugular vein. This operation unquestionably predisposed her to a later meningitis. In placing packs between the bone and dura one cannot help but break down some of the defenses which nature has already thrown up around an infected area and thus leaves an avenue for infection.

Of course, there are a number of cases on record with a positive blood culture who recovered following an obliteration of the sinus and ligation of the internal jugular. Nevertheless, this does not nullify the argument and if fatal cases were carefully studied, death in many of them would probably be found to result from meningitis particularly following a second operation. Therefore, if the writer had the case to do over again with a consistently negative blood culture; viz., three blood cultures taken at the height of the temperature with careful technique, he would be satisfied to freely uncover the sinus and nothing else. By doing this and leaving the wound wide open the patient would at least have a fair chance to recover. Of course if the blood culture became positive, there would be nothing to do but obliterate the sinus and ligate the internal jugular vein.

At any rate certainly if the sinus operation can be avoided and thus the use of packs made unnecessary, it seems logical to conclude that there would be much less probability of meningitis developing. The argument is certainly worth consideration.

The second case illustrates an extremely virulent infection. The blood culture was positive four days after the onset of an acute inflammation of the ear. This emphasizes the need of early blood cultures. It also is a classical example of a phlebitis internal in

contradistinction to the first case. Had ligation been done at the first operation perhaps the patient's life might have been saved. Nevertheless the first case shows that the sinus operation with ligation is not without changes.

It is interesting to note the frequency of sinus thrombosis occurring in suppurative mastoiditis. Hill reports 7 cases in 166; Downey, 5 cases in 79; Gerber, 25 in 524; Welty, 3 in 100 and the Massachusetts Charitable Eye and Ear Infirmary, 19 in 497; Naftzger, 6 cases in 192 mastoid operations. (Data quoted from paper by Naftzger.)

This is the first case in some twenty simple mastoids and one radical operated by the writer during the last two years. In this series there was also one case of brain abscess complicating a chronic otorrhea.

It is also worth while to note the variation in blood counts reported. Leob states that a count as high as 50,000 is not uncommon. According to Hays if the count is over 18,000 one should search for some other condition. Kerrison states that the count follows the laws of other suppurative lesions and quotes Crockett as stating that the blood count gradually rises to about 20,000.

There is a type of fever which sometimes complicates the convalescence following mastoidectomy, called, for want of better phraseology, "protein fever." Supposedly this is due to the absorption of bacterial proteins. Probably it is due more to the absorption of products of tissue disintegration, particularly if there is postoperative suppuration. However, the writer himself has seen a sudden high temperature in the later stages of convalescence with an altogether healthy wound; at least one whose progress was all that could be expected. Moreover, the patient recovered with no further interference.

At any rate the patient suddenly develops a high temperature. This may be an afternoon temperature and persist for several days. Usually there is no chill and the other classical signs of infective lateral sinus phlebitis are absent. Such cases should be observed for several days. During the interim blood cultures should be taken. If the same are persistently negative, Hayes states that the treatment *par excellence* is with a blood transfusion. He cites one case of recovery of a child although the transfusion was given while

temperature was 106 (mouth). This particular type of temperature, then, must be discriminated from that of a true phlebitis.

BIBLIOGRAPHY

1. Hays, Harold: Diseases of the Ear, Nose and Throat. Phil., 1925, F. A. Davis Co., 1925, pp. 382-409.

2. Kerrison, Philip D.: Diseases of the Ear Phil. and London. Lippincott, 1923, pp 343-357 and pp 477-489.

3. Leob, Hanau W.: Operative Surgery of the Nose, Throat and Ear. St. Louis, C. V. Mosby Co., 1918, Vol. 2, pp 360-369.

4. Naftzger, J. B.: Thrombosis of the Lateral Sinus, Annals of Otolaryngology, and Laryngology, December, 1924.

"THE GOLD DIGGER"*

BY RENIG ADE

(J. A. Dillon, M.D., Larned)

"Doctor, come right down to Jim Black's house, he's fell and they think he's broke his arm. You know where he lives, don't you?"

"Yes, I know where he lives." To himself, "I ought to know, I've gone to Jim's house at least fifty times in the past five years, and he never has crossed my palm with a ten cent piece." I'm very sorry but it will be impossible for me to come, you had better phone Doctor Skinner, the county doctor."

It was soon noised about the little town that Doctor F. had refused to go and look after Jim Black who had broken his arm, simply because poor Jim had no money. At the corner drug store a group of the business men were discussing the situation very frankly when the Doctor happened to drop in.

"Is it true, Doc, that you wouldn't go take care of a poor broken armed fellow simply because he couldn't pay you?"

The Doctor admitted the corn. A few contemptuous smiles were in evidence but nothing was said.

"Yes, it's true fellows, but I happened to know that Dr. Skinner, a competent man and county physician, was in his office at the time. He is paid for looking after our indigent sick. However, since my refusal to go on this case I have recanted and like yourselves I am rather indignant and shamed to think this town contains a man so low he would not go to a fellow citizen's aid in distress. So I am going to propose a plan by way of amends that I know will meet with your hearty approval.

Jim owes me \$125.00 which I am going to strike off my books to start with. Then I am going to donate fifty dollars professional services to him. You, Simpson, the grocery man, I know will give fifty dollars worth of groceries; you, Harper, the coal dealer, will be glad to send down five tons of coal; and you, Everett, the banker, your feelings were the most lacerated at my cold blooded attitude you will no doubt give a hundred dollars in cash. Then we will expect Hibbard here to install a new refrigerator free. How does it strike you, fellows? Then I have the names of thirty-five more for whom we can do worthy charity."

The Doctor paused, took out his note book to put down the name of the beneficent group as fast as they stepped forward. He was suddenly seized with a spell of sneezing, being a victim of hay fever and never having had his affinity determined. When he looked around after having politely turned his head, the only person in sight was Grandpa Sanders who was palsily extending a quarter for some Doan's Kidney Pills.

The Doctor smiled sorrowfully as he noted "man's inhumanity to man," slowly climbed the stairs to his office, opened his mail and painstakingly attended to his correspondence; pecking the following letters on the old Remington—vintage of '95:

Herocrome Co.

Gentlemen. I wrote you about a month ago concerning the case of Ezra Hicks, 97 years old, asking suggestions in regard to the use of your product in his case. He had been unable to get out of the house for two years, and, being of a literary turn, put in most of his time looking at pictures of movie stars and reading the Police Gazette.

Either by mistake or through premeditation he took double doses of your medicine. Since then he has been entirely out of control of friends and relatives. He is quarrelsome and has engaged in a number of brawls with officers of the law. He is utterly immoral and has broken up a number of homes.

Do you manufacture any anti-bodies that might counteract the terrible invigorating effect of the original product? Wire me.

Yours truly,

The Juneau Alaska Gold Bonanza Co.

Gentlemen: Enclosed find proxy you request. I am not in position to take any more of the stock. In fact will be glad to sell mine for one-fourth of what you are asking for your new issue.

Sorry to hear of the manager's ill health, for naturally this delays development work. I thought he was looking badly the time he sold me the stock in Kansas City. In fact he had to lean against the bar for support and the ladies went home without him. I suppose he is exposed to great hardships up there—mushing back and forth from Seattle to Portland. Still I would call him a fairly good musher.

Yours truly,

Mr. Knud Knudson,

Happy Hollow.

Dear Knud: Your letter received and very sorry to hear your wife's hair has all fallen out. I can't see just how it was my fault as I was called to the country on a call while she was taking her treatment. I instructed the office girl to shut off the current after five minutes but it seems her watch had stopped and she did not discover it for an hour. I have had considerable fun joking about it. I did not see anything in the circulars the manufacturers sent out about it taking the hair out. It did say however it would restore hair. The chances are the fellow who set up the machine got the wiring reversed. Tell her to go ahead with the medicine and not worry about the hair. Certainly she should wean the baby if he is three years old.

The pills in the blue envelope were for the hired man. He has what we doctors call scabies and should sleep alone as long as possible.

If I can get some live minnows will run out Sunday afternoon.

Yours truly,

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Published to make the average doctor better than the average; to improve his information, his usefulness, his standing and his income.

AL SMITH FOR MAKING THE TITLE "DOCTOR" MEAN SOMETHING

"I regard it as highly important that the ignorant and the unthinking be not misguided by the use of the title 'Doctor' because it presupposes in the minds of a great many people a knowledge of the human anatomy sufficient to enable the holder of such title to diagnose and prescribe for all the ills the human body is heir to. The title 'Doctor' should be made by law to mean what the great majority of people believe it means, and it should not be promiscuously bestowed upon individuals so lacking in proper qualifications as to be unable to tell the difference between indigestion and hydrophobia."

What doctor bent on establishing a medical monopoly or trust gave utterance to these words? It was no doctor; but a wise and warm-hearted statesman; no less a man than Governor Al Smith, of New York! Nor was he talking at random, but in explanation and emphasis of his act in signing the Webb-Loomis bill for the protection of the citizenry of the State of New York from those who would prey upon it by falsely representing themselves to be *doctors*. The Governor

stated that he had had the subject under consideration for two years and that, in the interest of the public health, he had "continuously urged the enactment of legislation which would rid New York of illegal practitioners." So it is manifest that this was no whim of the moment.

All of the duties of the office of Governor of the most populous of our States, with the addition of those necessary to active candidacy for the nomination for the Presidency at the hands of one of the major parties, could not put out of his mind the importance of seeing "that the ignorant and unthinking be not misguided by the use of the title 'Doctor'!" Is there not here shed much light on the wonderful hold this man has on his fellow-men? How many of our politicians would have had the humanity or the statesmanship to devote attention to a measure, the fate of which would influence few votes, at such a time? The ignorant and unthinking are seldom given protection. They are the objects of solicitude rarely, except when their votes are being sought. And this is not of the number of sensational appeals which would excite a ward meeting to enthusiasm.

There is this to be said for the organized doctors of New York: They were seriously behind this bill in sufficient numbers to command a hearing; and there is no evidence of any of them attempting to discourage the movement by bringing up specters to frighten the timid, saying "you will only give the quacks wider advertisement"; or inflating the pompous with "it is beneath our dignity."

It is plain that Governor Smith's mind and heart are both of a fine order. His mind drove directly to the main point in the protection of the sick man against the incompetent; viz., the abuse of the title "doctor." His heart caused him to vigorously espouse the cause, once his mind had become convinced of its justice and importance. Strangely it appears that few think of the free use of "Doctor" as an important feature; many doctors even applying the term to soda clerks and their own technicians in microscopy or radiology. Manifestly, there are more difficulties in the way of reserving to our exclusive use the title by which we medical men are known to the public, than lie in the way of the members of other professions. Some of this confusion is inevitable and is

owing to the ever increasing numbers of Doctors of Philosophy, Doctors of Divinity, and some others with whom we are glad to share the honored and honorable title. Much more of it grows out of the granting of the doctorate in chiropractic and kindred frauds, by so-called "Colleges" (and even "Universities"), to a mixed horde of individuals, whose only rational claim to the title of doctor, in its proper sense of being one learned or qualified to teach, would be that of the fattest boy in the class to be known as "slim," or the blackest negro in the ward to rejoice in the name of "snowball."

"There is no function of government to my mind more important than the preservation of the public health."

These are entirely familiar words; but the connection is new. Heretofore, we have heard them from the mouths of some welcomer of members of a medical society, a commencement orator, or a representative of some government agency asking doctors for more and more of their time.

So far as the writer can recall the expression of this idea has always been connected with either empty praise of doctors or interested plans to get something *from* them. This is the one instance,—and let it so stand out in your memories,—where the connection is such as to show that the plan is to get something *for* the doctors,—something in dignity and in pocket as an inevitable sequel to doing away with bogus "doctors."

The connection shows something more, and of equal importance. The Governor does not say in words that doctors of medicine are the preservers of the public health: he assumes this to be common knowledge needing no assertion. There could be no finer tribute; and its sincerity is perfectly attested by the unconscious manner in which it is paid.

A Loomis being joint author of the bill suggests the probability of descent from Dr. Alfred Loomis. It would please Dr. I. W. Faison could he learn that one of the line of his revered preceptor had much to do with legislation for suppressing the activities of unqualified and unscrupulous persons calling themselves doctors.

We hope to keep informed on the main incidents in the operation of this law, and, in the near future, to see enacted in this State some such or similar law for the better pro-

tection of the public health, and having as its very heart the strict limitation of the use of the title "doctor," so that medical men may not be confused with corn trimmers, back punchers, shoe menders or "character readers."

The intellectual equipment of our own Governor and the general high grade of those who are being elected to our Legislature, encourage us to believe that, when the doctors of the State formulate a programme dealing with this problem, they can put it through to the great advancement of the common good.

THE HIGH COST OF DYING

Some months ago this journal took occasion to comment on the high cost of hospital treatment. (The term "hospitalization" was used then, but the editor has learned from Sir Clifford Allbut that this is an inexcusable word.) A short time after this a very kindly medical gentleman suggested that since most sick folks either went or were sent to hospitals, and as it was represented to them their choice was between this and death; and, undertaker's charges being on such a scale as to cause the most recklessly extravagant to pause, the sick were verily caught between the upper and the nether millstones.

In the July number of *Minnesota Medicine* there is a vigorous, timely editorial on this very subject. From this we shall quote freely.

"The undertaker is peculiarly in a position to take advantage of his clients and it has become only too apparent that too many of them are guilty of gross overcharging. The near relative of the deceased is as a rule absolutely ignorant of what constitutes fair charges by undertakers for either materials or services. There exists a natural repugnance at the thought of bargaining over these matters. Such an attitude might be construed as a reflection on the departed one."

Is not this one of the most convincing indictments which can be drawn? And is not here depicted human nature at its lowest? Digging up the dead to rob them of jewelry is but a paltry offence compared with this; for the grave-robber violates no trust, and when he takes away the jewels he only deprives the dead of something for which there

is no need; he does not rob the living widow and her dependent children of that which the husband and father had hoped he was leaving for food, shelter and education.

That there are honest undertakers, who would scorn to take advantage of such circumstances is certainly true and is freely admitted; that "too many" are guilty of gross overcharging is a matter of common report.

Minnesota Medicine quotes a recent article in *The New York World* as saying an investigation there revealed that caskets which sold at wholesale for \$25 and \$30 were retailed at \$200 and \$300, that a shave cost a man fifteen cents when he was living and his estate is charged \$5.00 for the same service rendered him dead.

Even that kindly soul, Mark Twain, made it a point to expose the ways of extortionist undertakers.* He tells of a negro with a total yearly income of \$400 having to pay \$26 for the cheapest coffin in the town, and remarks, "It would have cost less than four, probably, if it had been made to put something useful into." But even more impressive is his narrative of an undertaker's account of Mrs. O'Flaherty's purchase of a coffin for her Pat:

'And that might ye say for that one?'

'Thirty-nine dollars, madam,' says I. 'It's a foine big price, sure, but Pat shall be buried like a gentleman, as he was, if I have to work my fingers off for it. I'll have that one, sor.'

'Yes, madam,' says I, 'and it is a very good one, too; not costly, to be sure, but in this life we must cut our garments to our clothes, as the saying is.' And as she starts out, I heave in kind of casually, 'This one with the white silk lining is a beauty, but I am afraid—well, sixty-five dollars is a rather—rather—but no matter, I felt obliged to say to Mrs. O'Shaughnessy—'

'D'ye mane to say that Bridget O'Shaughnessy bought the mate to that joo-ul box to ship that drunken devil to Purgatory in?'

'Yes, madam.'

'Then Pat shall go to heaven in the twin to it, if it takes the last rap the O'Flahertys can raise; and mind you, stick on some extras, too, and I'll give you another dollar'.

And so it comes about, that, by dint of a heartless playing on the devotion and vanity of a poor widow, a ghoulish places her under a debt which she will be many a year in paying; and he chuckles over his villainy.

It is unlikely that undertakers are more dishonest than the general run of men, though some might be disposed to contend that only the naturally cold-blooded would

take up that line of work. Most probably the great abuses complained of grow out of greater opportunity afforded by the victims' inexperience, lack of judgment, false pride and love of ostentation; and the possession of insurance money just acquired.

Inexperience and lack of judgment can be counted out of the problem by choosing some hard-headed friend to make the arrangements; such a person the undertaker's appeals to vanity would hardly convince. "Recent disclosures have led some life insurance companies to refuse assignments of policies to undertakers."

A great deal can be accomplished in bringing the charges for burying within reason if persons of prominence and wealth will set an example of simplicity in such matters. At a burial of a physician in the past few months, the writer heard it said that the cost was not less than \$5,000; and from his knowledge of that simple doctor he knows how far from his wishes it all was.

My individual preference is for a return to the burial practices of the Romans in one particular, and the rural Scots in another; and in these the undertaker had little part. Mark Anthony spoke in Caesar's funeral as his *friend*, not as a hired orator, or as one having special influence with the Gods: Ian Maclaren says: "Strangers do not touch our dead in Drumtochy, but the eight of nearest blood lower the body into the grave. The order of precedence is keenly calculated, and the loss of a merited cord can never be forgiven."

It is too much to expect that these simple methods will find favor; but we shall indulge the hope that there will result some encouragement to resist the tyranny of this group and that more will see the fitness and dignity of inexpensive coffins and simple funerals.

*In the June number of *Colorado Medicine*, an undertaker's was classed among the "lowly trades"; but plumbers were given the same classification, so it is evident that things are different in Colorado.

DISINGENUOUSNESS AS TO "PURE WATER"

Frequently we see in the daily prints accounts of the discovery of wonderful springs of life-giving water. A recent one says that a celebrated chemist has pronounced the waters of a certain spring in North Carolina "the

second purest in America, so far as his knowledge goes, the freest of mineral properties, and that radium is present in the water."

Truly this is a sentence well calculated to impress the frankly ignorant, and absolutely certain to catch the pseudo-intellectual.

Now let us see what this remarkable sentence means. The assumption is that *pure water* is just the thing we want in the way of water; in fact no animal will drink *pure water* except under compulsion. Melted fresh snow is practically pure; distilled water is absolutely pure; and each is a very poor drinking-water indeed.

It is interesting to observe, too, that this spring water is loudly touted as a curative agent because of being "freest from mineral properties;" whereas most waters advertised for their powers over disease are represented to depend for their virtue on these mineral properties!

Then we have the assurance that it contains radium. No one has ever shown that radium is of any value whatever when ingested; and, certainly, no one the least conversant with the *potency of radium for good and for evil* (accordingly as it is used by the competent or the incompetent) would advocate self-medication with radium in any form. Moreover, it is entirely possible that all water contains some radium.

So long ago as 1904, Dr. Wm. H. Taylor touched on this, in a lecture which the writer was privileged to hear: "It is asserted that radium has been found to be a constituent of some mineral waters. . . . All of us know, or at least have heard it said, that a potato or horse-chestnut carried in the breeches pocket is an infallible preventive of piles or rheumatism, as the case may be. Hitherto medical science has signally failed in its attempts to explain this extraordinary fact. May not radium in the vegetables be the explanation?"

Pure water contains nothing but hydrogen and oxygen, and it is doubtful if it is to be found in nature. Probably 99 per cent of public water supplies in the United States are perfectly satisfactory for drinking purposes, as to palatability and freedom from disease producing agencies.

The chance of contracting disease from drinking spring water is far greater than from using water from city supplies.

Doctors would do well to keep their patients and their publics informed on such vital matters so nearly related to the practice of medicine, and to call the bluffs of those interested individuals who put out dishonest and misleading reports so prejudicial to the public health.

By exercising their rights and performing their duties of leadership medical men can add tremendously to the prestige and influence of rational medicine.

HEMOPTYSIS IN HEART DISEASE

"The occurrence of hemoptysis is the occasion for differential diagnosis rather than the assumption of primary pulmonary lesion."

The foregoing is the introductory sentence of an article by Dr. O. R. McMurray, of Madison, in the *Wisconsin Medical Journal* for June.

It is evident that this author has seen patients ill served because of the assumption of pulmonary tuberculosis as the explanation of this symptom; and many of us have seen the same.

No one questions the propriety of considering tuberculosis as the most probable explanation of this symptom; the objection is to the neglect to bear in mind other probabilities and to make an earnest investigation.

Five illustrative cases are detailed, each of heart disease showing features differing from the other four, the main symptom in each being the spitting of blood.

Voltaire has said, "Thinking is so difficult; therefore most men choose rather to express opinions."

It is much easier to tell a patient who has put up blood that he has tuberculosis, than to investigate him thoroughly; just as it is easiest to ascribe all abdominal pain, not obviously due to some other lesion, to appendicitis; but it is not best for the patient.

It would appear that insufficient thought is given to the consequences to a patient of a *diagnosis of tuberculosis*. Even if soon afterward pronounced *cured*, most likely his job has been lost, his chance of obtaining another materially lessened, his whole plan of life disarranged.

In a doubtful case we do not hesitate to say this certain great injury far outweighs

the problematical benefit to be derived from early treatment of a disease which it is by no means certain that the patient has.

And all this applies to all the other presumptive signs of tuberculosis.

THE STATE BOARD OF MEDICAL EXAMINERS
RUNS TRUE TO FORM

This journal has repeatedly expressed its confidence in the Board of Medical Examiners which has so efficiently served the State during the past six years. No longer ago than last month the activities of this board were held up to the one newly elected as well worthy of emulation.

It is gratifying to learn that there is no inclination to turn over disagreeable "unfinished business" to its successor, even when such disposition could readily be made on plea of lack of time.

When the members of this board took their oaths of office, they did not have their tongues in their cheeks, or their fingers crossed; they meant what they said, and they have lived up to their promises.

It is a serious matter to deprive a doctor of his license to practice; but it is a more serious matter to allow one to continue to practice who will prey on the weakness of mankind in order to get wealth and place, or who will misconduct himself toward women patients entrusted to his care; and we didn't elect this board to perform trivial duties anyhow.

The membership of this board is known to most of the doctors of the State; but it is felt that a tribute should be paid to each individually, so, for this great service, we hereby render homage to L. N. Glenn, of Gastonia; W. M. Jones, of Greensboro; J. G. Murphy, of Wilmington; L. A. Crowell, of Lincolnton; W. P. Holt, of Erwin; C. A. Shore, of Raleigh; and K. P. B. Bonner, of Morehead City.

The people of the State are grateful to these men for showing that they place the general interest ahead of that of any doctor.

The more the unfit are cast out and kept out, the more the name of *doctor* will mean, and the more readily will the intelligent fraction of the general public rally to our support in the furtherance of all good works.





DR. ISAAC WELLINGTON FAISON

Dr. Isaac Wellington Faison was born March 5, 1853, in Duplin County, North Carolina, obtained his general education at Bingham School, graduated in medicine at Bellevue Medical College in 1882, practiced medicine in Davie and Wayne Counties, soon coming to Charlotte, where he spent the greater part of his long professional life, and where he died on July 9.

Recognizing my inability to do justice to our beloved and distinguished physician, I hesitated when asked to write this eulogy, but my loyalty and friendship for Dr. Faison

would not permit of refusal, and I am going to let my heart speak, for "out of the abundance of the heart the mouth speaketh."

For 30 years I knew Dr. Faison intimately—a Jonathan and David friendship. In 1896 I came to Charlotte, a raw country doctor; Dr. Faison at once shared his office and patients with me, this continuing for ten years; and any physician who has gone from country to city knows what that means. Competition is keen, and especially was this true of Charlotte at that time, where prestige and tradi-

tion predominated, which is now a fading heritage of the old South.

To know the real man, associate with him in his office and practice, when professional competition is at its height; you learn his faults and virtues. Dr. Faison's faults were temperamental and common to humanity and were so completely overshadowed by his virtues that they are forgotten.

I might write of Dr. Faison as a citizen, though this side of his life has been more competently written; but I cannot refrain from emphasizing how he glorified citizenship and lived the life of a Christian gentlemen, a devoted churchman and ever emphasized the spirit of the Divine Master in his daily walk and conversation.

I wish, however, to write of him as a physician. Dr. Faison was one of our leading physicians, not only locally, but throughout the state and section. He had the qualifications of a great physician: robust of body, clear, analytical in mind separating the gold from the dross, of studious habits, keeping abreast of medical thoughts, holding onto the old and tried, accepting the new when proven. Professionally, he never traveled in the ruts, was tenacious of purpose in what he construed to be the right treatment of his patients; a therapeutic optimist, he knew and studied things, and for this reason often got results where the therapeutic nihilist failed. Another element of his professional success was a sympathetic heart which also is passing with the advent of commercialized specialism. His big heart embraced not only the suffering patient, but the family circle as well. His administration did not cease when death claimed the patient, but the family felt they had a real friend; he gave his services unstintingly to the rich and poor alike, responding quickly and graciously when called. I have often heard him say he wished he did not have to charge a fee and have seen him return the fee to buy medicine. He loved his profession and nothing pleased him more than to see his plans and theories of treatment materialize.

Another element of success, and in my opinion one of the greatest in any calling and one which many lack, was enthusiasm. He magnified his calling to both laity and physicians (there was no half-hearted, apologetic stand), ever holding up the standards

of his profession, uncompromising toward the charlatan and quack, to him there was only one doctor—the regular ethical Doctor of Medicine. The medical profession soon recognized his ability and worth and honors were showered upon him: President of North Carolina State and Mecklenburg County Medical Societies, Dean and Professor of Pediatrics, North Carolina Medical College, President of Charlotte Sanatorium and on staff of other hospitals. All these positions he filled with the enthusiastic spirit characteristic of all his services. We knew him best medically as a member of our local medical society. He was well-nigh always present; punctuality was a part of his religious creed, and when Dr. Faison was absent, we knew his excuse was valid, and when present he always took part in the discussions; in debate he was virile and convincing, always commanding attention for we knew something worth while was coming; his repartee was spicy and through it all was a vein of humor and the walls would resound with laughter and applause. The Mecklenburg County Medical Society has lost an invaluable member.

The characteristic of greatness was manifested in his long illness of about two years, suffering greatly most of the time, yet he remained cheerful, and up to the last maintained deep interest in all the activities in which he had been engaged, especially medical news. As the shadows lengthened, his hand-grasp grew stronger, and while probably he never knew of the fatal malady which was sapping his life away, he sensed the end and briefly spoke of it, but the burden of his thoughts was of his friends and how good the world had been to him. He had no regrets when he went out to sea. The spirit of pagan philosophy as depicted by a latin aphorism, "*sic transit gloria mundi*," does not apply to the life of Dr. Faison for his glory has not departed, but will live with us who are left behind; rather could he have been in the mind of our immortal poet who said: "The lives of great men all remind us we can make our lives sublime, and departing leave behind us footprints on the sands of time." Dr. Faison has left us a rich heritage.

Charles Moore Strong.

PRESIDENTS' PAGE

Medical Society of the State of North Carolina

JNO. Q. MYERS, M.D.

With the discovery of bacteria and their etiologic relationship to disease the whole structure of medicine rocked on its foundations. So active has the evolution of medicine been that it has seemed almost like a revolution; as new fields were opened up for strictly scientific work there followed a mad rush for these new fields of golden opportunity. The whole profession suddenly became specialist mad. In this maelstrom of confusion they left home and clientele and ventured into fields for which they, all too often, were poorly prepared.

But now this first rush is over. It is time to settle down and adjust ourselves. Specialists we need and must have. Never again can the people be served without them. But also and even more emphatically true will the people never be adequately served until regulations are passed requiring the specialist to be in truth what he claims to be in name.

With all of the wonderful efforts of recent years to increase the ability of the individual, and the average of the entire profession, not one single requirement has been made of the specialist to standardize his work.

With added years in college and hospital a splendid foundation is laid, but after that no more is done. With this foundation inspected and passed by the board of medical examiners, it is then up to the individual to build upon it whatever superstructure he may choose. Our colleges and hospitals prepare students today much better than ever before to do the work required of the general practitioner, and our examining boards require the student to thoroughly prove his qualification along these lines. These boards, however, make no distinction between the man who wants to do brain surgery and the man who wants to specialize in pediatrics. For the board the applicant, if he passes, is qualified to do either equally well. Being qualified to do either equally well he is quite obviously not a specialist in either. He is just a good general man. There is no more justifi-

cation for accepting the unsupported claim of the strange doctor that he is a brain surgeon than there is for accepting the unsupported claim of the strange doctor that he is a brain surgeon than there is for accepting the unsupported claim of any man that he is a doctor. Yet we make him prove the latter but say never a word about the former.

Our present procedure makes it hard for the outside quack but very easy for the inside quack. To be sure the man who has traveled the hard road to become a doctor is much less likely to be a quack than the one who has had no such training.

Within the profession there are very few intentional quacks; there are those who are over supplied with self confidence and optimism. This leads them to undertake things which a better special training would enable them to do much better. This creates a real need for standardizing the specialist as well as the general man.

There is one other thing I must call to your attention. My predecessor said in his presidential address that during his year in office he visited every district in the State and many county societies and that in his close personal association with so many doctors he had yet to hear one doctor speak ill of another. This evidently was mentioned because it was in marked contrast with conditions existing only a few years ago. This contrast was so noticeable that it called for comment.

I hope that never again will any member of the State Society be heard to speak ill of a colleague. But let us analyze this situation just a bit. The time was in the days of our fathers and within the memory of many of us when the individual doctor depended for the volume of his business on a personal contact with his clientele. It was to his interest that his own virtues be magnified while the virtues of his competitor were minimized; he consequently spoke freely of his own virtues and his competitor's vices. It was hard for him to always realize that actions speak

louder than words.

Conditions now are different. The specialist depends for his living on referred cases. It is now a matter of "you pat my back and I will pat yours." The specialist can not afford to criticise either to his face or behind his back any fellow who may sometime refer to him a case. To be sure this situation was made worse because then the practice of medicine was much more a matter of opinion and less of proven fact than it is today. In matters of opinion men may honestly differ but in matters of fact a man is right or he is wrong.

Nevertheless only by adversity do we grow and showing a man his error may be the greatest kindness that can be done him. If we allow our hunger for referred cases to prevent an expression of difference of fact (or opinion), then we invite decadence of strength.

Here the pendulum can quite easily swing too far and in doing so the tendency will be to condone that which should not be condoned. The result will be weakness instead of strength. When every doctor fought single handed he was careful to be sure he was right before committing himself. If he was wrong he could be quite certain his competitor would find it out and show him up. Every time he was right and his competitor wrong it meant a point in his favor. Since his very existence depended on his average score he was forced, whether he wished it or not, to be careful.

The end accomplished by this checking up of competition can now be accomplished more effectively in a different manner, and checking up there must be if our people are to be best served. The talking must not be done to patients but between doctors face to face in society meetings. Truth is truth although it sometimes hurts, and go where you will, the world over, it is invariably true that those communities where there is found the best medical service have a live working cooperating medical society. Where there is an active and harmonious medical society there is seldom heard from the people any com-

plaint of lack of service. They may still be over specialized, or it would be better to say under generalized, and consequently have among them some cults; but the paradise for cults, the place that furnishes for these parasites an ideal incubator is the place over specialized where there is a dead or wrangling medical society.

Our self analysis or retrospection brings to light the need of these four paramount things if the profession of the State wishes to keep pace with progress:

First, as individuals we must take time to get our bearings. We must take time to study our cases and reason out the relation of cause and effect.

There is no place in any human activity where haste more surely makes waste. In a world of hustle and bustle, the doctor, of all men, must keep his poise. The merchant may clamor for small profits and a quick turnover, but the motto of the medical man should be quality, not quantity. His pay must be adequate, but should be determined by results rather than the number of visits.

Second, there must be an adjustment in fees and recognition by fellow doctors which will warrant more good men in doing general practice. Making it possible for the people to secure from reliable sources the service they seek will do more to suppress parasitic cults than all the ranting legislation that could be put across.

Third, plans for the efficient standardization of specialists must be perfected and put into practical operation if the medical profession maintains a high place in the estimation of our people.

Fourth, for mutual help and advancement medical men must have the advantage of harmonious working and cooperating societies where they can regularly meet and mingle often enough to check up on each other's successes and errors. These societies should be made so interesting and helpful that no doctor would choose to remain aloof.

The one axiom which will make possible each and all of these four points is, "all men can be led, while few man can be driven."

Emerson's remark about the world making a beaten path to a house in the woods where better "off" it made was certainly prophetic. Florence (Ala.) Herald.

The world is progressing. It now spends more money for face powder than for gunpowder.—Troy record.

DEPARTMENTS

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

SOME CHANGES IN EPIPHYSIS OF THE HIP

In order to solicit earlier examination by the general practitioner for diagnosis in hip conditions, I should like to review four pathological changes in which the femoral epiphysis is most frequently involved and emphasize the fact that in all of them the future function of the joint depends on the *early* diagnosis and treatment. The conditions to be reviewed are, epiphyseal coxa vara (as distinct from Legg-Perthe's coxa plana), Legg-Perthe's disease, tuberculosis, and acute epiphysitis. It may seem strange that any of these conditions could be seriously confounded, but experience shows that this is too often the case.

1. Epiphyseal coxa vara is the lessening of the normal angulation of the neck of the femur due to a slipping up of the neck at the epiphyseal line, the epiphysis remaining in its acetabulum, caused by any disbalance between the body weight and the strength of the epiphyseal junction.

The most frequent combination of symptoms is that of an overly fat youth between the tenth and eighteenth year with an ache in the knee and calf increasing in severity for several months. A previous illness or mild injury from a misstep may precede the onset. A frequent explanation of this complaint is summed up in the term "growing pains."

Examination reveals a hip joint markedly limited in motion, especially abduction and internal rotation, a tilt of the pelvis toward the involved side with leg abducted, a shortness in Bryant's line, and tenderness on deep pressure about the hip and in contralateral and longitudinal directions. No gross crepitus or atrophy can be made out. X-rays show a definite upward riding of the femur with the displacement located between the epiphysis and the neck. There is no evidence of

early destruction of the cartilage. The amount of slipping varies from a small degree to a complete separation. A complete separation may arise either suddenly following a jar or gradually over a period of several months.

In brief then always watch carefully a young fat boy or girl who complains of an ache in the leg lasting more than a few days with an adduction deformity arising fairly early. A good x-ray picture is the best differential point for proof, repeating at monthly intervals as long as symptoms exist, since often no changes are visible until late in the course.

Treatment consists in reduction and absolute immobilization of the joint for six months, balancing the metabolism, and glandular therapy when definitely indicated.

2. Legg-Perthe's disease, osteochondritis deformans juvenalis, or coxa plana, is a flattening and softening of the epiphysis of the femur with slow disintegration and absorption. The acetabulum is sometimes involved either primarily or secondarily, or there may be a lesion alone.

The course of the disease is one of slow but gradual progression following a mild injury or infection, with limp and pain, flexion and adduction early, atrophy of thigh and calf, but no afternoon rise in temperature, no night sweats or cries. The whole picture is one very similar to tuberculosis of the hip except the *lack* of acute pain, temperature, night sweats and cries, and of the usual flexion-abduction deformity seen early in tuberculosis.

There is marked limitation of motion as a rule only in abduction and internal rotation with varying amounts of shortening. Both hips are quite frequently involved.

The x-ray pictures are often the only and final point for diagnosis; they show a clear joint space with a softening and disintegration of the epiphysis (or acetabulum), and a flattening of the head into a "door-knob or mushroom."

The outstanding facts in this condition are early adduction without much atrophy or shortening, typical x-ray findings, and no definite signs of tuberculosis. Tuberculin test given intramuscularly will give negative results.

Treatment is general rest, local immobilization, balanced metabolism, until x-rays show a rehealing by increased bone deposition.

3. Tuberculosis is so well known that I shall refrain from a lengthy discussion, and will give only the features which might confuse with the other conditions.

The early story of tuberculosis of the hip is not unlike Legg-Perthe's disease except that the position assumed early is one of flexion-abduction-external rotation instead of as above noted, that night sweats and cries, and evening temperatures are present, that the atrophy and early disability are more marked, and that marked muscle spasm exists on slight motion. The x-ray pictures are usually quite different in that tuberculosis shows a hazy or cloudy joint with poor detail, and disintegration takes place without the changes of softening and flattening as mentioned previously.

Since a mild tuberculosis and a moderate Legg-Perthe's are often difficult to differentiate, a tuberculin test can be relied upon when given in large doses (2-6 milligrams) intramuscularly after the technique of Baer.

Treatment is conservative and prolonged with heliotherapy, etc., until complete cessation of all signs and symptoms takes place.

4. Acute epiphysitis is one of the most rapid destroyers of bone and cartilage seen in young children, and can become critical in a very short time. As its name implies, it is an infection of very acute nature usually streptococcus in type with high septic temperature and leucocytosis, intense pain even at rest. Motion is practically absent in all directions except slight flexion. The leg is held in marked flexion-abduction with constant muscle spasm.

Few of the symptoms and signs mentioned in the other three diseases are present here; there is, however, a hip joint full of infection, almost abscess in character, with certain destruction of everything available in the joint and eventual ankylosis in a deformed position if the condition remains very long untreated.

X-rays are negative during the first week, and then show more or less destruction of bone and cartilage.

Treatment is early arthrotomy, just as soon as even a doubtful diagnosis can be made as a mistake will do no harm in a non-infected joint but a delay means a far greater loss than is necessary. Follow the operation with drainage and non-irritating irrigations, with traction or a cast for immobilization.

CONCLUSION

The most valuable points in general for these four conditions, vary sufficiently for a fairly ready diagnosis, though they may differ only slightly.

In coxa vara, x-rays are the most certain help except at that stage just before slipping exists, then a negative tuberculin test and no acute infectious evidence limits the case to two somewhat similar conditions whose treatment is very much the same until more definite developments arise.

In Legg-Perthe's the same facts hold true as in coxa vara except that epiphyseal changes can be demonstrated much earlier by x-ray.

In tuberculosis a positive tuberculin test is proof positive especially in the face of the usual signs and symptoms of all tuberculous lesions.

In acute epiphysitis the evidences of acute infection are so definitely that difficulty does not arise until the condition has become sub-acute or chronic, or until a draining sinus frees the results of destruction, as frequently happens also in tuberculosis.

*Allen F. Vashell, M.D.,
University of Virginia.*

Note—With the consent of the Editor-in-Chief there will appear from time to time in this column contributions from various men doing orthopedic surgery in the domain of the Tri-State Medical Association. In this issue appears a treatise on differential diagnosis of certain hip joint complaints, by Dr. Vashell, head of the department of orthopedic surgery, University of Virginia.

Dept. Ed.

When a modern woman is sewing on tiny garments, they're her own. —*Sacramento Bee.*

"Could I see the General?"

"I'm sorry, but the General is ill today."

"What made him ill?"

"Oh, things in General."—*The Progressive Gro-*

THERAPEUTICS

FREDERICK R. TAYLOR, B.S., M.D., *Editor*
High Point

A PRESCRIPTION

Rx Chocolate syrup
Quinin sulphate
Alcohol
Quinin sulphate
Rhubarb
Angelica seed
Elecampane
Saffron
Fennel
Extract of aloes
Gentian
Zedoary
Cubeb
Myrrh
White agaric
Camphor
Alcohol
Heroin hydrochlorid
Tincture of euphorbia pilulifera
Syrup of wild lettuce
Tincture of cocillana
• Fluidextract of squill
Fluidextract of senega
Antimony and potassium tartrate
Cascarin
Menthol
Oil of orange
Oil of lemon
Oil of coriander
Oil of anise
Deodorized alcohol
Syrup
Precipitated calcium phosphate
Deodorized alcohol
Water

The editor some months ago ran across a prescription that, so far as he can learn, is essentially the one given above. He did not get it out of some massive tome of the Middle Ages. It is on file in a North Carolina pharmacy, dated 1925, though it is not written in the form given above. It is, of course, written quantitatively;—the above is merely an attempt at a qualitative expression of its ingredients, as a quantitative calculation of all its components was too laborious and would serve no useful purpose, for we have

no criticism of the dosage of any ingredient, but merely of the shocking polypharmacy and general qualitative composition. Moreover, *it was not written by an ignorant physician, but rather by one whose educational standards and general standards of practice are distinctly above the average in most ways, and exceptionally high in many ways.* We are not launching any attack on the physician in question at all, and there is not the slightest personal animus in this, but we are distressed that such a prescription, or at least one containing approximately the substances listed, could be written by a really high-grade thoughtful medical practitioner in our State, and we are completely antagonistic to the proprietary system that makes such a thing possible.

The prescription as originally written reads:

Rx Cocoa quinin, 4 drams
Viotone, 4 drams
Compound syrup of cocillana, 4 drams
Aromatic elixir q. s. ad, 2 ounces.

A teaspoonful is directed to be taken at a dose. The mixture was prescribed for a sick child.

There are 32 substances in this prescription, 3 of them listed twice, as they are present in two of the proprietaries specified, or in a compound ingredient of aromatic elixir as well as a separate item in the elixir. We may dismiss them as unimportant and confine our attention to the 32. We are not sure of the accuracy of the 32, but we believe we have approximated the true list of substances contained in the prescription. Viotone is said to be a concentrated Warburg's tincture. It is hard to say exactly what this means without an actual formula, for Warburg's tincture is of somewhat varying composition, as some of the drugs in its original formula are not obtainable today, according to Stevens in his "Text Book of Therapeutics," and the drugs given as these present in Warburg's tincture are those Stevens lists as usually contained in it today. We understand that heroin is no longer in compound syrup of cocillana, but we believe that it probably was present when this prescription was written.

As stated above, we are not personally after the author of the prescription. Indeed, so

subtle is the proprietary menace that almost any physician, no matter how educated or conscientious, is liable to be caught off his guard and find himself guilty of an atrocity like the above unless he exerts eternal vigilance. It is the danger of catchy easy-to-remember names for proprietary shotguns that we would attack, and it is the need of a real study of drugs that we would stress, especially a study of the comparatively few great drugs. There is not space to write more on this point, but the prescription written out at full length should preach a sermon that needs no embellishment. We wrote more at length on this matter in a paper read a few years ago before the North Carolina State Medical Society entitled "The Shame of Modern Medicine—Getting Our Postgraduate Education in Pharmacology and Therapeutics From the Propaganda of the Proprietary Drug Houses." It may be found in the 1924 State Transactions, and also in the September, 1924, number of the Virginia Medical Monthly.

SOME A. M. A. BOOKS OF ESPECIAL VALUE IN THE FIELD OF THERAPEUTICS

The A. M. A. publishes several books on therapeutics of such outstanding value that I have often been surprised that they are not found in more physicians' libraries. I think the reason is that they are not known well enough. All of them are authoritative and well written. All are sold at a very reasonable price. All are condensed into small space, and are therefore especially worth while to the man whose time for study is necessarily limited.

There are two main classes of these therapeutic works: I. Those which expose undesirable products. II. Those which describe products which appear to be worth while.

I. The first class may be subdivided into two groups as follows:

1. Books showing up frankly advertised nostrums. 2. Books dealing with so-called "ethical proprietaries" which the Council on Pharmacy and Chemistry has found to be undesirable in certain respects.

1. In this group are found Vols. I and II "Nostrums and Quackery." They deal with such products as asthma cures, baby killers,

cancer cures, nostrums for diabetes, products leading to convictions under the Food and Drugs Act, etc. The second edition of Vol. I was published in 1912 and contains much material that is now obsolete, some of the preparations discussed in it having been removed from the market by governmental action, some having died a natural death, and some having been changed in composition to escape the clutches of the law. Vol. II, published in 1921, is still pretty well up to date. The chief value of these volumes is in educating patients who have seen advertisements of various nostrums who inquire as to their virtues. Simple categorical denial of alleged virtues does little good in many instances where a published analysis of the product with an authoritative interpretation thereof, does some real good. "But," someone may object, "this wastes a lot of time." Yes, it does, in some cases. So do our schools and colleges waste a lot of time on some people. President Sharpless, of Haverford College, used to divide college men into two classes. Both classes are exposed to an education; but one class is susceptible, the other immune. So with patients. However, if we are to realize our teaching function as we should, we must take the risk along with our educational institutions of wasting some time on the immunes, in order that the virus of knowledge may infect the susceptibles.

2. The second group of books under discussion consists of Vols. I and II of "The Propaganda for Reform in Proprietary Medicines." These take up such matters as various shotgun proprietaries, irrational endocrine mixtures, the hypophosphite fallacy etc., though some things are dealt with that could as well be handled in "Nostrums and Quackery," such as the Abrams Electronic Reactions, etc. Most of the things in the "Propaganda" volumes are advertised especially to physicians, whereas most of those in the "Nostrums and Quackery" are advertised directly to the laity. The propaganda volumes are really of greater value to the physician than are the others, for they protect him from falling into many a trap laid for him by various proprietary interests. Some of the products discussed are very bad, some are probably intrinsically good, but are marketed with claims that are unscientific and objectionable. Certainly, however, it is

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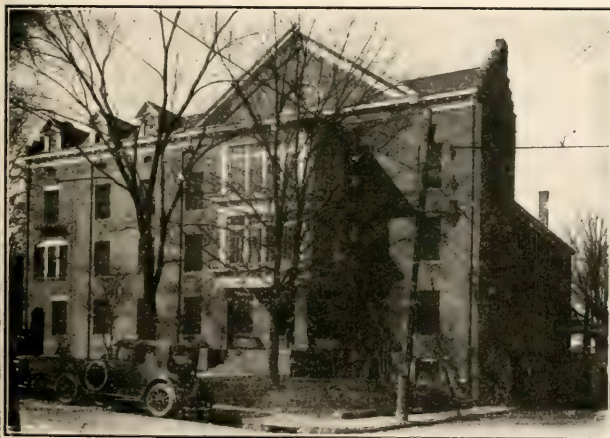
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well worth while for the physician to have these volumes on hand for study and reference, especially Volume II, published in 1922. It is really quite refreshing when some detail man calls to describe the virtues of some proprietary of little or no value, to turn to these volumes and tell *him* just what his stuff is, and what it is not good for.

So much for works that are destructively critical. Destructive criticism is absolutely necessary to clear the ground in order that we may rear enduring scientific structures. We must not stop there, however, or we shall become therapeutic nihilists, and let us state here and now, once for all, that *this department does not stand for therapeutic nihilism any more than it stands for therapeutic bunk.*

II. The second great class of A. M. A. publications on therapeutics is thoroughly constructive. To those short-sighted persons who would advance the claim that the Council on Pharmacy and Chemistry is a bunch of therapeutic nihilists, it seems necessary merely to point out that there are not far from 1,800 preparations described in "New and Non-official Remedies," and in the neighborhood of 400 in "The Pharmacology of Useful Drugs." Both these books are valuable. Just because a product is listed in N. N. R. does not make it a valuable preparatino, but certainly it puts in a class deserving our attention, and it is always a pleasure to discuss "Council-passed" products with representatives of the houses that manufacture them. "The Pharmacology of Useful Drugs" is a small inexpensive volume that is of very great value for the busy physician who would keep up with the real essentials of practical pharmacology. The "Handbook of Therapy" is a very compact little volume of great value for quick reference. Neither it nor "The Pharmacology of Useful Drugs" can take the place of the larger standard works on therapeutics or pharmacology for purposes of thorough study, but I know of no other works which give so much information of really essential value in so little space, in their respective fields, as these little books.

One other little A. M. A. volume on therapeutics is also worthy of note. This is the "Epitome of the Pharmacopeia of the United States and the National Formulary." It is largely informative rather than critical, but

being of pocket size, is of especial use for quick reference regarding such matters as the dosage, solubility, etc., of the drugs included in the two large volumes from which it is derived.

SOME NEW PRODUCTS ACCEPTED BY THE COUNCIL

Two new alkalies put out by Powers-Weightman-Rosengarten have been accepted by the Council. These are, Tribasic Calcium Phosphate and Tribasic Magnesium Phosphate. They are advocated as gastric antacids, and are claimed to be superior to the alkaline hydroxids and carbonates because, being insoluble, they do not cause alkalization of the patient, according to a recent notice of them in the Journal of the A. M. A. We must confess that we do not clearly understand how an insoluble preparation can by its alkalinity neutralize any acid. An adsorbent like colloidal aluminum hydroxid might be useful in taking up excess acid, but it does seem as if an alkali that neutralized an acid would have to have some further solubility. We would be glad to have further light on this subject.

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

ANOTHER STATE DUTY

Lately in the Superior Court of North Carolina at Charlotte a twenty-year-old wife was tried for her life for the murder of her husband. There was no doubt that she had killed him. She so testified, There was no adequate reason for killing him. She was vigorously prosecuted by a group of three able attorneys. They asked for a first-degree verdict in order that she might occupy for a brief final moment the electric chair in Raleigh. She was found not guilty, although she had stated under oath that she killed her husband. How did she escape conviction? She was insane. Therefore she could not commit murder, although she might kill.

The trial lasted a week. It was a strange, though not an unusual investigation. Throughout the entire procedure the girl was the

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subject of a lunacy inquiry and at the same time the defendant in a murder trial. Had the lunacy inquiry been carried out first there would have been no trial. Such an investigation would have occupied the attention of the court for about six hours. The girl was without funds. She was a worker in a mill in which she received a weekly wage of fifteen dollars. None of her people had any money. Two attorneys volunteered their services in her behalf. Two medical men examined her, and they offered the opinion that she was feeble-minded and, at the time of the commission of the deed, insane. The prosecution contended that the medical testimony should not prevail, because the medical examinations had been made hurriedly, superficially, and inadequately by men not highly trained in that domain of medicine. In that contention the prosecution was correct. A jail cell is no suitable place in which to carry out proper medical investigations. Two or three days constitute too little time in which to make a thorough investigation of an obscure mental condition. Two medical men not skilled in mental work should not alone bear the responsibility of so grave a burden. But the defendant was without funds, and her counsel had to get such medical help as was available. The jury probably did right in being guided by the medical opinion, poor in quality though the opinion was. Little is known about the operations of the human mind either in order or in disorder. So-called alienists know little of mental mechanisms. But juries know even less, and even an intelligent jury will hardly take the risk of setting up its medical opinion against that of even an ordinary doctor. The juror in his home is guided by medical service. Why should he be unwilling to hearken to the doctor in the court room? But sometimes the jury teeth come down upon the bit, in disregard of medical testimony. And sometimes a sane defendant escapes conviction, and sometimes an insane prisoner takes the chair. Fear of the latter is what causes the spokesman for the jury to announce "Not guilty."

But the whole procedure is wrong. An investigation of the prisoner's mental condition cannot be properly commingled and mixed up with a trial for murder. The two things are different. They do not go along together. A human being is a unit. A mental

disorder may be the reflection of disease of some portion of the physical body. An abnormal mental condition may be the result of bad mental heredity. The examination of the prisoner, if it be thorough and dignified, must include a careful investigation of the individual's origin, in ancestry and in environment, and such an investigation can be carried out in a jail cell in only the most superficial and unsatisfactory manner. And if mental disorder be suspected in a prisoner, that prisoner though helpless on account of poverty, should have the benefit of the most thorough medical survey the state can afford. The state itself commits a crime in prosecuting a monetary pauper who is also a mental pauper. The state should make adequate provision for the investigation of the mental condition of every prisoner charged with the commission of a grave crime. No one of sense and character believes that all crime is the manifestation of mental unsoundness, but many do believe that heinous crimes, and repeated crimes of less serious import, bespeak disordered or defective mentality.

The court of investigation is concerned with behavior—with acts. The medical man is interested in the states of mind which the acts portray. Crime is a form of behavior. Is it sane or insane behavior? Sometimes one, sometimes the other.

Each state should have a Commission on Crime, as a part of the judicial machinery of the state. To that Commission should be automatically referred for study all those who are charged with the commission of serious crimes. To that Commission should be automatically referred for investigation all those who repeatedly commit crimes. Such a Commission should carry on its studies in a well-equipped hospital in which careful medical work could be done. The report of the Commission's investigation of a prisoner should be filed with the clerk of the court, where it would be available to the court, to the prosecution, and to the defense. If the prisoner were reported to be sane, he would then be tried. If the prisoner were reported to be insane, he would not be tried. Justice would then sit in more dignified fashion high on her throne. And out of the studies that would accumulate there would eventually come understanding of the origin, the cause, and the nature of crime. At present we know

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nothing about it. We do nothing about it. We do many things to so-called criminals.

RADIOLOGY

JOHN D. MACRAE, M.D., *Editor*
Asheville

X-RAY DIAGNOSIS IN PEDIATRICS

The usefulness of x-rays in pediatrics is not fully appreciated and I wish to call attention to some of the most common applications in diagnosis. Space will not permit elaborate discussion of them.

The study of bones through fetal life and on until the subject has become an adult, then a consideration of the viscera within the thorax and examination of the gastro-intestinal tract are the divisions which cover most of the subject.

Osteology: At the fourth month of pregnancy and sometimes earlier, the fetal skeleton can be so well depicted in x-ray films that the position of the fetus is recognized and the question of whether the pregnancy is single or multiple may be determined. The skilled obstetrician may not need this aid in carrying on his special work, but it is a matter of common observation that men of skill resort to any means available to gain better knowledge of their cases.

Films made of the bones and joints in the new born and followed up through the developmental period by other films made at intervals of six months present most interesting demonstrations of the first appearance of centers of ossification in the ends of the long bones and the progressive growth of epiphyses until they become fully united with the shafts or diaphyses of these bones. A knowledge of epiphyses is necessary to the understanding and correct treatment of dislocations and bone injuries close to joints in children, for such injuries are frequently complicated by epiphyseal displacement.

Epiphysitis is a condition which has not been discussed freely in literature until recent years. The epiphysis at the head of the femur becomes softened and flattened as a result of low grade infection (?), trauma, because this is a weight bearing structure in this flattening process; also it is a fact that the patient is one who has grown rapidly, in

whom the epiphyses have been somewhat delayed in their union with the diaphyses. The symptoms of this condition are similar to those of early hip joint tuberculosis, but the x-ray film will show rather clean-cut outlines of the bones entering into the hip joint and thus make the differential diagnosis from tuberculous hip disease. This condition is known by the names of the doctors who described it first, Legge-Perthe's disease.

Epiphysitis in the head of the tibia is another condition which has been given the name of the doctors who first described it, Osgood-Schlatter's disease. It is also known as apophysitis of the tibial tubercle. In this condition, the center of ossification in the head of the tibia is occasionally accompanied by a second center of ossification lower down and at the upper end of the tibial spine at the point where the tubercle attachment of the patella tendon develops. It appears that this tubercle becomes inflamed secondary to the trauma which is furnished by the powerful pull of the quadriceps muscle dragging upon it through the patella tendon which is attached to this tubercle. A film of the affected bone made in the lateral position will show the tubercle detached from the shaft of the bone and projecting outward and forward from the epiphysis at the head of the tibia like a beak. It will be somewhat overgrown and of irregular contour.

Apophysitis of the os calcis is recognized by tenderness of the heel where the tendo achilles is attached to this bone. The sore spot is too high up on the back of the heel to be explained as a stone bruise. Pressure from the hard counter in the heel of the shoe is sometimes thought to be a causative factor but x-ray films made in the lateral position will show the epiphysis somewhat larger than normal and unusually ragged in contour. This affection like the foregoing one seems to have as one of its direct causes the trauma furnished by powerful muscle contraction, that is, the contraction of the gastrocnemius muscle dragging on the epiphysis through the tendo achilles. Developmental peculiarity and trauma seem to be constant factors in these three types of epiphysitis and it is not settled whether or not infection plays a part.

Scurvy, congenital syphilis and rickets are three diseases of early childhood which are clearly shown and easily recognized in x-ray

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films. Tuberculosis of bone and non-tuberculous osteomyelitis begin to appear after the third year of childhood and present characteristic features in x-ray films.

Thoracic viscera: Within the bony cage of the thorax our attention is first directed to the heart. In health this organ is represented by a shadow of certain form and definite size in relation to the chest. Congenital disease such as a patent foramen ovale with mitral stenosis produces a characteristic deformity. Disease of any of the valves of the heart producing stenosis or incompetency will bring about changes in the relative size of the chambers of the heart and probably some part of the heart muscle will become hypertrophied. In other words a definite change in the form of the heart as shown in x-ray pictures will accompany each type of heart disease. Pericardial effusion is represented in the x-ray picture by a peculiar rounding form of the heart shadows.

Mediastinal lymph nodes become hypertrophied as one of the first manifestations of infantile tuberculosis, but it must not be forgotten that hypertrophy of these lymph nodes follow most of the diseases of childhood. Therefore a careful consideration of the history and clinical manifestations of diseases is necessary for diagnosis.

The trachea and bronchial divisions and the lungs are so perfectly shown in x-ray films that any examination of the chest is now incomplete without the aid of x-ray examination.

Tracheo-bronchial adenopathy, like mediastinal lymph node hypertrophy, occurs secondary to most of the infections of childhood but is especially one of the first signs of tuberculosis in children. Pulmonary tuberculosis, lobar pneumonia and broncho-pneumonia produce such characteristic changes within the lungs as demonstrated in x-ray films that differential diagnosis can generally be made between these conditions and can certainly be made when history and findings are considered.

The pleura when thickened is easily demonstrated and effusion into the pleural cavity is easily recognized and its extent measured, but it is not possible to determine from films only, whether the effusion is a creamy pus as seen in empyema or the clear straw colored serous effusion of a simple case.

Foreign bodies inspired into the lungs find their way into the right side of the chest in the large majority of cases because the right main bronchus is larger and more nearly in direct line with the trachea, than is its fellow on the left. If the foreign body is opaque to x-rays it will be clearly shown in the film, but if it is not opaque, its presence will be recognized by its secondary changes in the lung. For instance, if a grain of corn, a bean, or a pea finds its way into one of the larger bronchial tubes in the right lower lung it will permit air to reach the air cells more easily than it will permit this air to be expelled. Thus emphysema will be localized in the area of the lungs, supplied with air through the obstructed bronchus. This emphysematous condition will produce a depression or flattening of the diaphragm on the affected side, a displacement of the mediastinal viscera away from the affected side and a greater penetrability for x-rays. All of these changes are clearly demonstrated in the x-ray films. A few days after the inspiration of an organic foreign body such as a peanut, chemical irritation is apt to follow because the substance being soaked in the warm secretions of the lung produces substances irritating to the lung which in turn bring about a pneumonia in the affected part of the organ. I have seen several cases of "peanut pneumonia."

Gastro-intestinal system: Barium, suspended in malted milk or butter milk or mixed with cream of wheat or mashed potato, may be given to the child if considerable tact is used. We may then x-ray the child's intestinal tract fluoroscopically and with films made at certain intervals during the digestive cycle. Stricture of the gullet, dilatation of the stomach, pyloric ulcer and pylorospasms are the most common conditions looked for in the upper part of the tract. We seldom find pathological conditions of the small intestines but dilatations of the colon, obstructions at the ileo-cecal junction and adhesions about the cecum may be demonstrated. The appendix is not infrequently the offending organ in children as it is in adults, and not infrequently its diseased condition may be demonstrated or it may be cleared of suspicion of disease by means of x-ray study.

The roentgenologist is frequently called upon to locate foreign bodies which have been swallowed. These foreign bodies generally

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cause the mothers more agony than they do harm to the children. *I have x-rayed a number of children who have swallowed open safety pins, one child who swallowed a knife, several who had swallowed coins and have never seen harm follow in any case where the foreign body was left alone and nature allowed to take its course.* In one case disaster followed the use of the esophagoscope where the specialist attempted to remove a coin from the lower esophagus. The attempt was not successful. The parents took the child back to the country and it died a few days later of pneumonia.

LABORATORIES

HARVEY P. BARRET, M.D., *Editor*
Charlotte

DISCUSSION OF "DIARRHEA AND ENTERITIS AS A PUBLIC HEALTH PROBLEM"

There are several points in Dr. Hamilton's paper that I think need bringing out and maybe elaborating more. One thing he said which has always been a puzzle to me, and that is that "Dysentery offers a challenge to the health workers of North Carolina." It has been offering a challenge for a long time, and I think it is about time you took up that challenge.

Think of losing 1,500 children every year—not once in a while, but every year. The average for the last seven years has been 1,477—nearly 1,500. That occurs every year, and how much work is done to prevent it? I am afraid not a great deal, except in isolated instances. Suppose you had a dozen cases of meningitis in children at the same time in your community! There would be an awful howl; there would be a lot of work done, and all sorts of newspaper and other publicity would be given to it, just for a few cases, with possibly two or three deaths, whereas here you have every year 1,500 deaths. That, to me, is the biggest thing about it. Last year, in Charlotte, we had twenty to thirty cases of poliomyelitis, and the Government even sent a man down to investigate it. Probably we had two or three deaths, whereas we have 1,500 deaths in North Carolina every year from dysentery, and how much attention is paid to it? Too

little; in fact almost none.

I would not be so presumptuous as to make any suggestions to this body of men, but there are four things I should like to mention. First is the name of the disease. We do not call typhoid fever and other diseases by their old-fashioned names; we call it typhoid. Here we have bacillary dysentery, yet we call it colitis and summer complaint and other old-fashioned names. Probably all these children die from bacillary dysentery; i. e., dysentery due to the *bacillus dysentery*. First then, let's call the disease by its proper name. Second, it should be reportable to the State Health Department under that name. In all of the counties I know anything about, it is not even a reportable disease. We know how many deaths we have, but not how many cases. It ought to be a reportable disease, just as typhoid is. Third: Another thing that should be done and can be done, and which has been done in some quarters of the State, is to make cultures from all these cases, so we shall know what type we have. There are two main types, but quite a few sub-types, and until we make cultures we shall not know with what type we are dealing. In this connection I am here to say that I am always ready and willing to make cultures from any and all cases you may have. If notified I will gladly, and without expense to any of you, come to your community and make the cultures. Typhoid can not be prevented by vaccination alone, nor by health measures alone, but by a combination of the two.

Now, as Dr. Hamilton said, vaccination in dysentery has been a rather unsatisfactory thing. It is unsatisfactory chiefly because it is a very toxic vaccine, and frequently causes very severe local reaction, and it has caused death. I have been very much interested in vaccination by mouth in this disease. This method of oral vaccination has been tried out very thoroughly by various workers in France where it has been applied to grown people rather than to children. So far as I know it has not been used in this country, except experimentally. Enlowe, working at the Hygienic Laboratory in Washington, has done some very careful experimental work on the vaccination of animals by mouth against dysentery infection, and with very encouraging results. According to the French workers,

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it has proved a very satisfactory method of vaccination and could be applied very well to children, for it would be no trouble to give this vaccine in that way. I have been fortunate enough to get one or two health officers interested in trying to do something in the way of isolating the different types of organisms and vaccination against the disease. In Charlotte last year we vaccinated 300 children. That was hardly enough to draw any conclusions from, though we did get some very satisfactory results. Dr. Hollingsworth, of Clinton, who is health officer of Sampson County, has been kind enough to offer to vaccinate his whole county, and we are going to work with him next year. This year we are simply making cultures from the cases he has, so as to know what type of vaccine to give. Dr. Hudson, in Greensboro, is also helping me in getting cultures, and I should be glad to make cultures for any health officer in North Carolina, free of charge.

Discussion before N. C. Public Health Assn., 1926.

PEDIATRICS

FRANK HOWARD RICHARDSON, M.D., *Editor*
Brooklyn, N. Y. and Black Mountain, N. C.

MOTHERS AND CHILDREN

A real treat is in store for the doctor who deals with children,—and hence, of course, has on his panel a host of worried mothers and puzzled fathers,—when he picks up the latest reprinting of a book called *Mothers and Children*, written by that eminently clear and perennially suggestive writer on children's topics, Dorothy Canfield Fisher. She has a way of saying so simply, and apparently so easily, the things that the doctor has been wanting to say to the parents and uncles and aunts and grandmothers of his little charges, that he is constantly left wondering why it is that he has not long ago put things in this very way.

Most applicable, too, and usable in the consulting room, are some of the quotations with which chapters are headed. Take this, for instance; from *Amiel's Journal*: The inner and unconscious ideals of the parents are what teach the child: their remonstrances, their punishments, even their bursts of emotion, are to him but thunder and comedy;

what they worship is what he desires and reflects. How is this, for the consideration of thoughtful doctors who are called to advise in the case of "difficult" children? "Ninety per cent of the usual 'naughtiness' in childhood will upon impartial analysis prove to mean 'inconvenience to elders.'" And this: "No amount of verbal exhortation to politeness will make the impression on a child's mind that is made by constant association with courteous and gentle-minded elders."

One of the things that the doctor has constantly to guard against, both on his own part and upon that of his over-conscientious young mothers, is what has been considered under the suggestive chapter heading, "Taking Children Too Seriously." Not that any one can ever take anything about a child too seriously, if by "seriously" we mean carefully, even prayerfully. But if by "seriously" we mean fussily, overzealously, with an unwillingness to let nature and everyday boy-and-girlishness have an place in our scheme of things. We children's doctors are accused,—and too often with some grain of truth in the charge,—of encouraging mothers to make the burden of the care of their children so crushing that they sometimes find their burdens heavier than can be borne. To such doctors, and to such mothers, this chapter can be heartily recommended.

A most illuminating thought, or constellation of thoughts, is opened up for our consideration in the treatment here accorded "Obedience as a Transitive Verb," and "A Sliding Scale for Obedience." A searching analysis is applied to what we parents and doctors really want, or think we want, to produce in the children under our care, when we talk about obedience. If we want the unthinking, servile, automatic compliance with any one who chances to be for the moment in authority over them, like the abject, unthinking obedience of the "well-broken" horse, who is never to be free but always to have some superior will to which he must bow, then we shall want to go about our task in one way. If on the other hand we recognize the fact that the obedience that we want must lead naturally and inevitably to a complete freedom from compliance with any superior mind in adult life, except as we yield compliance to law and the will of the majority as expressed in law, we shall have to

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proceed entirely differently.

The readers of this column are in the habit of using their own minds and forming their own opinions. *Mothers and Children* is excellent exercise for such mature, thinking readers. As such it is recommended to their consideration.

UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*
Charlotte

THE MANAGEMENT OF ACUTE GONORRHEA

The history and treatment of acute gonorrhea presents a picture unparalleled in all medical literature. What acute infectious disease is so universally treated by the profession, yet so unscientifically, and, I might add, ignorantly managed as is acute gonorrhea? The importance of a thorough knowledge of and correct management of gonorrhea and the fearful toll society has to pay from its ravages, is admitted by the whole profession, yet we make little progress in the management or cure of the average every day case of gonorrhea brought to us for treatment.

I believe two forces are responsible for the lack of study and progress of the medical profession in the prevention and management of gonorrhea.

1st. Society, through false modesty, has made a comparatively simple disease a most difficult problem to both prevent and treat. Dr. P. S. Pelouse, of the University of Pennsylvania, says: "This same society that has paid toll has been and is standing in its own sad light by false modesty, which brands gonorrhea an 'unspeakable disease' and yet, one hardly knows how to break down this barrier without doing more harm than good."

2nd. This same viewpoint of society, that gonorrhea as an unspeakable disease, has been magnified in the minds of the medical profession, until even urologists are loath to admit that they even treat gonorrhea, and, on the program of our best urological societies, a paper presented on any phase of gonorrhea is unwelcome. The old Roman physician felt that it was beneath his dignity to have anything to do with the treatment or management of gonorrhea. His viewpoint

has certainly been handed down through the ages, and is now prominently reflected in the careers of our present day genito-urinary surgeons. The urologist of today seems to feel that because gonorrhea is a disease not to be mentioned in polite society, it is unworthy of the best scientific minds representing our specialty. Again, many of us smart and chafe under the name of venereal specialist. In other words, we do not object to the income that is to be derived from treating gonorrhea, and its complications, but we dislike the reputation of being a "venereal doctor." I sincerely believe until we thoroughly eradicate this viewpoint, first from our own specialty, then from the profession at large, and, thirdly, from society by education, we will not progress rapidly in the management of one of mankind's worst enemies.

It is amazing how gonorrhea is so frequently treated without any apparent idea of the pathological picture or how the gonococcus is acting in the individual victim who applies for relief. Can we not think in more scientific terms than that of some bactericidal chemical that will stop the purulent urethral discharge which is the result of a reaction between cell (in this instance the lining of the genital tract) and the invading gonococcus; which is nature's way of combatting the infection?

A brief history of the following case will illustrate how acute gonorrhea is *mismanaged* through lack of understanding of the fundamentals recited above.

Case: An elderly man came into our clinic one week ago with subacute gonorrhea, complicated by a prostatic abscess and a seminal vesiculitis. About two months ago he contracted a simple acute gonorrhea and immediately consulted his friend and family physician who made the diagnosis, without investigation or study, and outlined his treatment, which was as follows: When asked by the patient if he could be cured, the doctor said: "If I do not cure you in three days, you do not have to pay me one cent." In three days the patient had no discharge, thanks to the ignorant but truthful doctor, but, on the fourth day, he was in bed with the following symptoms: Chills, high temperature, pain in the perineum and marked dysuria. The diagnosis of acute prostatic abscess was evident. When seen by me after

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BERNARD L. PETERSON

Technician Serology Department

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being treated for two months, the patient had a chronic indurated right lobe of his prostate gland, and a chronic seminal vesiculitis, which will require months and months, and possibly years of treatment, if he obtains a cure.

The citing of the above case is not the exception but a very frequent and familiar history to the experienced urologist.

As to the management of acute gonorrhea, pages have been written and hundreds of chemicals have been put forward, heralded and advertised as specifics for gonorrhea; yet, today we can truthfully relate that we have no single drug or chemical that gives satisfactory results when used as a routine measure.

Is it not time for us to stop thinking in terms of treating symptoms of gonorrhea? For example, stopping the discharge, which I admit generally satisfies the patient and usually fools the doctor. We must realize and believe, that it is not our pet drug that cures gonorrhea after all, and that we can do nothing except to assist nature.

The following simple rules may help to govern the management of gonorrhea by those interested, and I hope that this article will at least help to stimulate investigation and study in one of our most far reaching and difficult problems.

1st. To carefully study and examine every case of urethritis diagnosed as gonorrhea, is absolutely essential. We can no longer depend upon the swear for a diagnosis, but in doubtful subacute and chronic conditions, we must culture and reculture, if necessary, make several examinations before giving an opinion. This is an accepted practice of the profession in other infections and diseases, why should it not be true in gonorrhea?

2nd. Treat each patient as an individual with an acute infection, which infection may be mild or severe from the onset. Forget that there is such a thing as routine treatment for gonorrhea. To illustrate; you should not use argyrol as a local injection in the case of patient "B" just because some pharmaceutical manufacturer recommended it and you thought it cured patient "A." Patient "B" might have a severe fulminating infection from the very onset, where it would be better not to use a local injection at all for fear that we might further abuse the severely inflamed urethra and almost from the beginning cause troublesome complications.

3rd. Gentleness in every procedure connected with the treatment of gonorrhea cannot be over emphasized. Every effort should be made to prevent trauma which can be brought about by various causes, such as improper urethral injections, sexual excitement, alcohol and other internal irritants, in fact, anything that is a severe irritant to the mucous membrane and which prevents the natural drainage from the urethra, should not be used. Remember that the patient in reality cures himself, unless prevented from doing so by the doctor. *How can I assist nature in her efforts to cure gonorrhea?*, is a slogan well worth consideration and thought by those interested.

CROSSNORE'S QUANDARY

Our 1926-27 school year is opening—will have opened before you see this. We have prayed to be shown that our school is needed, and have it proven that there are children in our mountains who want a high school education and cannot get it unless they are given a chance to work their way in a boarding school. So we have persistently refused admission to those that we felt could go elsewhere, and have blindly accepted those who had no "chance" but ours. Today the list numbers 92 boarders that have engaged space. What about those that neglect that ceremony? We have beds and cots for 47. We have sold our three old double beds that held three each and have ordered 24 double cots from an Army store. The Army salvage prices no longer exist and these beds with straw ticks on them cost us \$13.25. There's not a penny in sight to pay for them, but, maybe you would like to settle for one anyway.

Our dining room has 80 seats. By moving the serving tables out, we can seat 96. Until we need the stove there's place for a small table to seat 8. We must seat our boarders and 6 teachers and housemothers, 104 in a room 20x30 feet. Can you beat it?

We have 4 girls, sleeping on 2 double deckers, in each room 12 feet square. In the hall double deckers are put as close as they can stand. This means 5 or 6 girls to room and dress in each room. The boys are just as crowded. Surely if the Lord has sent these children in answer to our prayer He means for us to do our best for them, and our prayer is that He will make them so strong that the unhygienic crowding will not make them sick. What would you do with sick children in such quarters? There's not a room on the place that can be spared for an infirmary. Isn't that food for thought? We hope you are thoughtful. And remember, more pupils call for more scholarships, that they may earn their way. And also, it calls for more money for running expenses. That means more clothes for the sales. We have far more buyers than clothes and buyers who want better clothes, buyers who come many miles and bring money. We want that money. Oh, how we need it! And we can get it if you send the clothes. Please, be quick.

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August 5.

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*Your assistance in keeping this list revised to date, as well as in supplying medical news notes is greatly desired.—Ed.

CORRESPONDENCE

THE WEST VIRGINIA MEDICAL JOURNAL

Charleston, W. Va.,

July 30, 1926.

Dr. James M. Northington,

Professional Bldg.,

Charlotte, North Carolina.

My Dear Doctor Northington:

After reading your letter of the 26th I want to express my pleasure, in the fact that you noticed the editorial alluded to, in our State Journal. You know how it is yourself. You know that so much of an editor's work is taken for granted and read—and maybe appreciated—but no one ever takes the time to let him know it.

Over "DR. JULIE La Salle Stevenson's" claims I had a good laugh. I can well appreciate how serious a matter it was to you down there and how you had to subordinate the comic to the more practical, but when I read the various celebrities denying her acquaintance it made me laugh out loud. But I derived a great deal of benefit from it as well. It struck me that in the personality of this woman and her career was the "DE LUXE Charlatan," that as every herd or crowd or system has its exponent or sign board in whose make-up is the key or keys to all the others, just so you could in her boldness, her audacity, her possession of an ego so overpowering it had made her actually persuade herself she was what she said she was, her brazen appropriations, her carelessness in the use of names a moment's thought would have dictated could easily be refuted, finally her feeling (and every one of that kind of people has it) that because she said or did a thing that made it right—in other words the end justifies the means; I say in all these you can read how all the lesser ones operate. In a way a few more of her highly colored, picturesque kind on being exposed would, or at least should help to eliminate a goodly number of the lesser ones.

But there must be a number of doctors in your locality as there is everywhere else who believe it is a waste of time to do what you did in regard to this fakir. Closer investigation will reveal these same gentlemen never do anything to perfect the organization. They acquire wealth; oftentimes have the best practices; appear at any function of sufficient

advertising importance but "never wash the dishes afterwards, or for that matter help to prepare the meal." Yet they have more to lose than anyone else and in a malpractice suit, or case of violation of ethics, are quickest to seek help from the rest of the hive. Personally I hold them responsible for activities of charlatans and fakirs. An irregular cannot practice without a doctor "just around the corner" to help him out of the "dark hour" that inevitably gets him. I hate to say so but nevertheless I have come to believe it is this so-called high class doctor that very often does the helping out. A united organization would eliminate them.

As to your president's address I wish to say he sums up my idea of a good doctor today in what follows about Dr. John Whitehead of Salisbury when he says, "He saw sick individuals but he saw it (disease) comprehensively in terms of the individual as a whole." I think your president said something no Mayo Clinic or Government or any other person or aggregation will ever be able to deny. I am not much for faith in legislators as expressed on page 421. I have addressed the West Virginia State Legislature along with some of my colleagues, and our confidence in their intelligence is pretty low, especially if some chiropractors have seen them first. It may be different in your State.

I would strongly advise you to raise your dues to \$15.00 or \$20.00 and get a full time secretary. It is one of the best and most satisfactory things our society ever did.

A thoroughly liked the article on "the balanced mind." Wish I had it myself but know I never will although I have seen a few I believed had it. The balanced mind, however, I do not believe creates. To create requires something of a wild fool, heedless of the consequences. Nor do I believe it would be altogether a happy world if we were all balanced. Personally I like those friends best who are—shall I say a little erratic. But the great need of today is more balanced minds. They review; they dispassionately observe; they correct; they eliminate. Where would we be if they were not? God knows; I do not.

I have enjoyed coming in contact with

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you. Believe we might see a good many things alike.

Come and see me if you are up this way and write to me if something interesting comes up.

Thanking you again for your writing me, I am,

Very sincerely,
HARRY M. HALL.

THE C. V. MOSBY COMPANY
Medical Publishers
3616 Washington Boulevard
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July 19, 1926

Dr. James M. Northington,
Southern Medicine & Surgery,
Professional Bldg.,
Charlotte, N. C.

Dear Doctor:

Every reader of the Mosby Journals congratulates you on the stand you have taken in your publication against quackery in the State of North Carolina. Our only hope is that you will have sufficient power to drive these dirty birds entirely out of your State.

We also congratulate the medical profession of North Carolina on the stand it has taken regarding Genesis vs. Modern Science. There is only one stand, of course, for the scientific man to take in matters of this kind.

Very truly yours,

C. V. MOSBY COMPANY,
C. V. Mosby, President.

THE THERAPEUTIC GAZETTE
Philadelphia, 7-17-26

My Dear Dr. Northington:

Replying to yours of the 16th. I think your plan as to "Quacks" is excellent and I regret that as our pages are devoted to therapeutics we cannot serve your cause in print.

Very truly yours,
H. A. HARE.

NEWS ITEMS.

DR. JOHN WESLEY LONG, of Greensboro, died at his home on Sunday, August first. Until a year ago, Dr. Long had been one of the most energetic surgeons and citizens of the State; for the past few months his health had seemed much improved, and he took an active part in the deliberations of the State Medical Society in June. His end is attributed to coronary embolism. A more extended notice will be taken in our next issue.

DR. BERNARD W. CAREY, Director of the Commonwealth Fund Child Health Demonstration in Athens, Georgia, has recently been awarded the honorary degree of Doctor of Public Health by the University of Georgia. The degree was given in recognition of Dr. Carey's services in promoting child health in Georgia.

DR. BURNLEY LANKFORD, Norfolk, Virginia, was drowned in attempting to rescue his nephew in front of his cottage on the ocean front on August 3. Dr. Lankford was born in 1880, and was a graduate of the Medical Department of the University of Virginia in the Class of 1903.

STATE BOARD OF HEALTH—At the June meeting of the State Board of Health, malaria and bacillary dysentery were made reportable.

At the same meeting the quarantine period for scarlet fever was reduced to twenty-one (21) days.

THE MARY ELIZABETH HOSPITAL, Raleigh, announces the opening of an obstetrical wing, July 28, 1926. The construction of this new wing follows the plans of modern maternity hospitals. The department consists of delivery room, sterilizing room, physicians' scrub room, diet kitchen, nursery, babies bath, showers, private and semi-private rooms. The equipment is new throughout and is designed especially for obstetrical use.

REVIEW OF RECENT BOOKS

BULLETIN NO. IX OF THE INTERNATIONAL ASSOCIATION OF MEDICAL MUSEUMS AND JOURNAL OF TECHNICAL METHODS. SIR WILLIAM OSLER MEMORIAL NUMBER. Appreciations and Reminiscences. Illustrated, \$10.00. Privately issued at 836 University St., Montreal, Canada, 1926.

We have received No. 1065 of the fifteen hundred copies issued. It would appear that the observation in the foreword, "The writings about Osler seem destined to exceed in number and in volume those of his own productive pen," is entirely true. And such writings they are!

Among the great men who have here written of Osler as they saw him from different angles are:

William H. Welch, Sir Clifford Allbutt, W. S. Thayer, A. S. Warthin, Sir Arthur Keith, Professor Pierre Marie, Professor Ettore Marchiafava, Professor Carl Sudhoff, Lt.-Col. Fielding H. Garrison, Thomas McCrear, Rufus Cole, Joseph Pratt, J. G. Adami, Leonard L. Mackall, C. K. Mills, Geo. Dock, H. A. Hare, W. W. Keen, Barker, Finney and a dozen more.

He is lovingly dealt with as student, companion, doctor, teacher, editor, organizer, bibliophile: the different phases of his life and work in the several cities which were in succession his home are discussed by intimates.

It is no reflection on Cushing's "Life" to say it is doubtful if it is of as much interest as this memorial volume. It could not be possible for one man to collect data on the *inwardness* of a man to compare with the story told by so many masters, each writing of his own period or of some one characteristic of this myriad-minded man.

THE MEDICAL CLINICS OF NORTH AMERICA. July, 1926, Volume 10, Number 1, Philadelphia Number. W. B. Saunders Company, Philadelphia and London.

This number is well balanced treating of the rare and the common, the acute and the chronic. Subjects include carcinoma of the bronchus, abscess of the liver, paresis without syphilis, polycythemia vera and tuberculous pericarditis; also hay-fever, pneumonia, angina pectoris and hyperthyroidism.

Of unusual value is the clinic of Dr.

Thomas Fitz-hugh, Jr., on the "Differential Diagnosis of Hemorrhagic Conditions."

ELEMENTS OF PATHOLOGY, by Allen G. Ellis, M. Sc., M.D. Rockefeller Foundation Visiting Professor of Pathology and Director of Studies, Medical Department of Chulalonghorm University, Bangkok, Siam. One time Associate Professor of Pathology, Jefferson Medical College, Philadelphia. With 95 illustrations. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia.

Interest is at once excited in a book written by a professor in a Siamese University, and this interest is enhanced by reason of the author having once been a teacher in one of our own schools.

The book is written especially for beginners, but most doctors have yet to make a beginning in pathology, so this should be a great recommendation.

The place of pathology in medicine is defined. Much space is given the causes of disease and the body reactions to these causes.

In part two postmortem technique and pathological anatomy and histology take up half the book.

The style is clear throughout, and the author never loses sight of his promise to make the text understandable to a beginner.

HAY-FEVER AND ASTHMA, A Practical Handbook for Hay-Fever and Asthma Patients, by Ray M. Balyeat, A.M., M.D., Instructor in Medicine in the University of Oklahoma Medical School; Consulting Physician to St. Anthony Hospital and to the State University Hospital; Director of the Oklahoma Asthma and Hay Fever Clinic, Oklahoma City; Member of the American Association for the Study of Allergy. With 27 illustrations. \$2.00, F. A. Davis Company, Publishers, Philadelphia, 1926.

Hay-fever and asthma vastly interest at least three classes; patients, doctors and the families of patients. Anything shedding light on this trying problem is welcome. This work aims to meet the needs of all three.

The known history and relation of plants and animals to the causation serve as an introduction. There is a clear short chapter on methods of determining The Cause. The unsatisfactory state of resort treatment is explained.

MISCELLANY

ABSTRACT

THE CAUSES OF CICATRICIAL CONTRACTION

J. Shelton Horsley, M.D.
Richmond

(Read before the American Surgical Association,
Detroit, May 24, 1926.)

In surgical literature there has occurred the statement that defects in the common bile duct or the ureter would be satisfactorily repaired if the epithelium would cover the defect, and treatment along this line has been instituted. Most strictures, however, have an epithelial covering. Contractions of the neck following burns have a practically normal epidermis. A histologic study of the epidermis and of the connective tissue in cicatricial contractions of the neck, and of the connective tissue in scirrhus cancer of the breast, in malignant stricture of the bowel, and in cirrhosis of the liver, was made. There appears to be no essential difference from a histologic standpoint between contracting scar tissue and non-contracting scar tissue. Indeed, both of these resemble very closely normal connective tissue as found in the corium and elsewhere.

The origin of connective tissue and of scar tissue is discussed. Baitsell's researches seem to show that connective tissue in the chick embryo and the amphibian originates from a transparent cell-free ground-substance which later becomes fibrillated. H. E. Jordan, of the University of Virginia, thinks that the fibroblasts which develop in the scar tissue from granulation tissue come chiefly from lymphocytes but to some extent from fixed connective tissue cells and from endothelial cells.

Scar tissue, a type of connective tissue, is a lowly tissue, and requires less nutrition than the more highly differentiated tissues. Consequently, when nutrition is too poor to sustain highly differentiated cells, connective tissue may dominate.

The following classification is given for the causes of cicatricial contraction:

1. Direct causes of cicatricial contraction: toxic products produced by,

(a) Burns (by heat, light, or electric-

ity)

(b) Chemicals

(c) Bacteria

(d) Cancer

(e) Trauma and cells affected by lack of blood supply

(f) X-ray or radium.

2. Indirect causes:

(a) The general disposition of the individual toward scar tissue formation

(b) The portion of the body affected

(c) The absence of strain or tension on the scar

(d) Lack of proper blood supply

(e) The absence of natural resistance toward physiologic secretions or excretions.

(f) The quantity of scar tissue.

Each of these causes is discussed. The conclusions are as follows:

(1) Cicatricial contraction is due to scar tissue, and covering the surface of a wound with epithelium alone does not prevent contraction except so far as it prevents infection or unnecessary trauma to a raw surface.

(2) The cicatricial contraction following x-ray or radium burns differs from other scars, in that the deeply penetrating rays cause an overgrowth of vascular endothelium which partially or completely obliterates the blood vessels and makes a greater degree of ischemia.

(3) There is a biologic resistance possessed by tissues of the body to the normal secretions or excretions of their environment, so that in transplanting tissue this must be taken into consideration.

(4) Certain regions of the body, possibly because of some inherent quality or possibly because of mechanical conditions which retard complete extension, are more prone to scar tissue contraction than other regions.

(5) As scar tissue is a lowly tissue that can survive on less nutrition and under harder conditions than more highly differentiated tissues, it seems essential in avoiding cicatricial contraction not only to prevent the irritating effects of frequent injuries or of toxic substances, but to provide a blood supply so that the higher tissues may survive and not be overwhelmed by scar tissue.

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APPENDICITIS—THE CRESCENDO OF TREATMENT*

JOHN WESLEY LONG, M.D., Greensboro

It seems that we will forever have to deal with appendicitis since, like the poor, it will always be with us. However, the improvement in the operative technic, the newer methods of dealing with certain of the sequelae and the steadily decreasing mortality are gratifying evidences of progress in the treatment of this protean disease. Nor should we forget to mention that greater skill and the wisdom of experience which naturally come to those who handle large numbers of these cases, are factors that are not to be despised in the treatment of so grave a malady. We may never reach the heights of perfection in the treatment of appendicitis, but the profession is steadily climbing till once in a while we get a glimpse of the promised land.

Primarily, a vast majority of cases of appendicitis are in the hands of the general practitioner. The surgeon is not disposed to complain of the dilatory tactics of the practitioner, but it is manifest that there still lingers in the minds of some of our brethren the conviction that a brisk purgative will save many a case of appendicitis from the surgeon's knife. And this attitude is not confined to the doctors who live at the cross roads and in the remote rural districts. We frequently meet with instances of this kind among practitioners of our towns and larger cities; whereas, those physicians who are away out on the firing line often act more promptly.

I grant you that a purgative will relieve many cases of appendicitis, thus obviating

the necessity of operative interference for the time being. That looks like an inning for that time-honored method of treatment; but it doesn't take into account the large number of patients with appendicitis whose chances for recovery are thereby absolutely destroyed. There is no question in my mind, and I am not alone in this opinion, that the worst things we can do in acute appendicitis is to give the patient purgatives and food. Anything that increases peristalsis will spread the infection; purgatives stimulate peristalsis and food does the same thing by the formation of intestinal bolus and gas. Therefore, I would lay down as the foundation of the treatment, the starting point if you please, to neither purge nor feed a patient with acute appendicitis. Of course, there are some instances in which it would not be proper to operate; cases in which the patient's general condition forbids any surgical interference, but these are exceptions.

The time limit for operating on appendicitis is an important factor. The more acute the case the earlier the appendix should be removed; since acuteness means a higher degree of infection. It is safe to operate no matter how severe the case may be, as long as the infection is confined to the appendix. The presence of spreading peritonitis is an additional indication for prompt operation, and the more peritonitis we have the more urgent the case.

In doing an early operation for appendicitis there is usually no necessity for employing drainage. Even where there is a fair degree of peritonitis and the right iliac fossa and pelvis are filled with serum or buttermilk-

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

like fluid, we can usually safely close the abdomen without drainage. There are many reasons for this, which I have dealt with in another paper and will not take up your time to discuss here. If the surgeon would feel easier about his patient to drain, I think it is all right; this matter must be left to the judgment of the operator. In other words, we have the two types of cases here: those that can be closed without drainage and those that should be drained.

The consensus of surgical opinion is that drainage material should be confined to rubber tubing. We have gotten far away from packing the abdomen with iodoform gauze. We older surgeons have gone through that school and gradually eliminated gauze drainage. About the only way in which I use gauze in draining these cases is in a cigarette, and I do not allow the gauze to project from the end of the tubing; nor to remain in situ but a short while.

The next class of cases we have to deal with is characterized by rather high leucocytosis, more or less beginning local peritonitis, and as a whole makes the impression upon the operator that there is danger of intestinal obstruction. In the treatment of these cases I have most decided convictions. We have two things to do: first, to remove the affected appendix, and second, to prevent an ileus. I am convinced that the best way to accomplish the latter is to do an enterostomy at the time of the primary operation.

For many years it was my custom to wait till ileus developed before doing an enterostomy but experience convinces me of the truth of the old adage that, "An ounce of preventative is worth a pound of cure." We no longer fear to puncture the intestine because of the dread of a permanent fistula since properly safeguarding the fistula by suturing the omentum about the tube, as I first described in 1916, will absolutely close the fistula when the tube is withdrawn. I have had cases that did not leak a drop from the bowel after removing the tube; the omentum shutting down like a trap door, closing and sealing the fistula; therefore, one need not hesitate to do an enterostomy whenever it is indicated. The best point in the alimentary canal to do an enterostomy in cases of this kind is, as a rule, the cecum. I often utilize the stump of the appendix through

which to insert a tube and secure it with a purse-string suture, after which the omentum is sutured about the parts.

The drainage of the alimentary canal safeguarded by this simple procedure will usually prevent the development of ileus and sometimes relieve the condition even after an obstruction has developed. Enterostomy does not interfere with draining the pelvis or right iliac fossa, which is sometimes necessary. I would like to emphasize the value of intestinal drainage in these cases and ask you to apply it in suitable cases and be convinced for yourselves of the great good it will do.

There yet remains to be considered the most advanced type of appendicitis with its sequelae. I refer to those cases in which the infection has involved the peritoneum and the intestine itself producing widespread peritonitis and intestinal obstruction. In some of these cases removing the appendix, draining the pelvis and the right iliac fossa, and even draining the alimentary canal by an enterostomy, does not avail. One reason of this is the fact that in advanced cases there are two points of obstruction, one being in the pelvic portion of the sigmoid and the other in the terminal ileum. Hence, you can readily understand that even though we drain the colon through the cecum thereby relieving the sigmoid obstruction, we still have an obstruction in the ileum which is of course above the drainage tube.

Let's enumerate the successive steps in these desperate cases of appendicitis. First, we have an infected appendix usually hanging over the brim of the pelvis. Either the appendix ruptures, or the infectious agents pass through its walls, like water through blotting paper, and attack the adjacent intestine which happens to be the terminal ileum. The bacteria invade the walls of the gut causing its serosa to lose its luster and the muscularis and mucosa to become thick and edematous. The toxins paralyze the gut stopping all peristalsis. Cut a gut that is thus infected and it will stand open like a garden hose and not collapse as does the normal bowel. In addition to the actual infection of the gut itself there quickly develops an intestinal toxemia which is more destructive to the patient than is the peritonitis.

Shortly after the ileum has become involved the pelvic portion of the sigmoid goes

through the same process that took place in the ileum, and we have an obstruction of both sigmoid and ileum. I used to wonder why so much gas accumulated in the upper portion of the abdomen rather early in these cases; since the natural history of the progress of these cases is understood it is perfectly clear that the tympany is due to the distension of the colon from the gases which cannot pass through the obstructed sigmoid. You know that it is a surgical axiom that if the bowels move the patient recovers; otherwise, he dies.

The condition of this class of patients is not only desperate, but progressive. The peritonitis rises higher and higher. The intestinal toxemia becomes more and more intense causing numerous untoward complications, as nephritis, myocarditis and involvement of the central nervous system. Something must be done to relieve the situation and that quickly. Now, remember that drainage of the alimentary canal is the *sine*

qua non of success; and, as there are two points of obstruction, there must be two points of drainage. I have been able to save some of these patients after a low primary enterostomy by doing a high secondary enterostomy. But I think a better plan in certain cases is that of Mr. Sampson Handley: namely; to drain the small bowel into the transverse colon by an entero-colostomy just above the rising tide of peritonitis, and to drain the colon by a cecostomy as already described.

Mr. Handley reports five desperate cases of peritonitis following appendicitis treated by this method and in December last I reported two cases before the Southern Surgical Association. By this plan the entire small intestine empties itself through the anastomosis directly into the transverse colon; and by reverse peristalsis of the colon its contents are carried through the cecal tube. In favorable cases nature overcomes the obstruction in both ileum and sigmoid and stools pass by the natural route.

THE INFLUENCE OF THE MIND IN FUNCTIONAL AND ORGANIC DISEASES, OR THE PHYSIOLOGICAL PRINCIPLES UNDERLYING ALL HEALING PROCESSES OF THE HUMAN BODY*

E. PIERRE MALLET, M.D., Hendersonville

To single out this as the psychological moment in the era of evolutionary progress through which we are passing, would be hazardous to say the least, but I am loath to believe that there is a thinking man in this audience who does not dimly sense the dawning of a new era in the evolution of the race. The signs of the times must be evident to you all. Psychology has been taken from the small class of special students to the general public, and is being applied to the conduct of human affairs in all its phases, particularly

in our own special field in the care and cure of human ailments. As one writer says, "The revelation of the subconscious mind and its hitherto unknown powers will, in ages to come, be recognized as the supreme achievement of the twentieth century, if not the supreme achievement of all ages."

Why should not the medical profession as a whole, grasp the significance of this movement now apparently appreciated only by a handful of psychologists and psychiatrists, but being eagerly grasped by the laity and unconsciously used by the horde of cults swarming over the land undertaking the treatment of disease? I am hoping that it

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

may prove both interesting and stimulating to the profession to review the remarkable influence of this mysterious and all powerful factor in the field of our daily activities.

While I have been interested in this and allied subjects for many years the popularity of lectures on psychology and mail order courses in healing without medicine or doctor, together with the revival in the churches of the admonition given by Christ to His disciples to go out and heal the sick by the laying on of hands and prayer, induced me to study the subject again, and more closely.

The method of conscious auto-suggestion as used by Coue, the optimistic little pharmacist of Nancy, seems to be the only one resting upon a scientific basis and free from any religious or other extraneous attachments. Medicine and humanity in general is deeply indebted to one French chemist, Pasteur. Possibly Coue may also render some service by bringing this simple method of psychotherapy to our notice, as all doctors admit without hesitation that they use suggestion in their practice either consciously or unconsciously. I can see nothing fundamentally antagonistic to the orthodox teachings of medicine and surgery in the conscious employment of suggestion in any of its numerous forms; and furthermore, I hope to show that it can and ought to be studied without prejudice from a purely biological point of view. Superficially viewed these methods of suggestion would seem to offer a ridiculously simple panacea for the ills to which human flesh is heir, but upon careful investigation and study they seem, rather, to reveal a most efficient therapeutic agent which Nature has thoughtfully provided for every living creature, the value of which scientific medicine fails to appreciate and utilize except in the most homeopathic of doses. The deeper one delves into the mysteries of the human mind and body the firmer this conviction grows.

In the worry and stress of professional life I am inclined to think that few doctors give any serious thought to the subject, though it strikes at the very heart of medical practice. The subject is such a far reaching one that, in the time allowed, it can be but barely touched upon, but I think I can show to any open mind, and to one who has kept in touch with the psychological advances of our times, that it is neither a foolish nor a dangerous

method, as many eminent physicians seem to think; but that it appears to rest upon true laws governing that principle or primary cause underlying all creative, preservative and reparative processes of the human body, the unconscious or subconscious mind. I am not interested in any particular method or system of mind cure, healing by prayer, Christian Science, New Thought or others, but want to draw your attention to the powerful influence the mind has over the physical processes of the body. All scientists admit as a fact that the sum of knowledge now possessed by man of all physiological processes make the admission of some psycho-dynamic force necessary, call it what you will. The wonderful powers and activities of the sub-conscious mind are now household knowledge, and popular lectures and correspondence courses are being attended by all classes of people. But most of the profession seem to regard it more as a scientific fairy tale, interesting if true, but having little if anything to do with the practice of medicine in their daily rounds.

To facilitate the logical discussion of the subject it seems advisable to review the commonly accepted hypotheses upon which all systems and methods of affecting the body through the mind are founded, not attempting to establish their truth, which I think is now generally accepted, with possibly some reservations by the bitter enders of materialism.

1. Man is endowed with a dual mind, the conscious and subconscious, or one mind with two distinct phases of activity or states of consciousness.

2. The human body is a confederation of individual cells, each one being endowed with an intelligence commensurate with the function it performs, and all being controlled by a central intelligence, acting through the nervous system by means of a mental force or energy.

3. The subconscious mind controls all functions, sensations and conditions of the body. It is endowed with immense intelligence and creative power. It possesses instinct or intuition of bodily needs, knows what to do in emergencies and acts with a rapidity and skill that the conscious mind has never attained. It is the builder and renewer of the body.

4. The subconscious mind is credulous and is amenable to suggestion.

This is simply the bare statement of the facts that have been established by the study of the mind aided largely by hypnosis. Since these important discoveries came to light, constant effort has been made to find some simple and practical method by which this wonderful inherent force or energy can be consciously controlled and stimulated to increased effort along any lines desired, either specific or general. Strange to say the medical profession has shown little interest in these efforts, but has confined itself almost exclusively to the use of drugs and physical measures to stimulate this psycho-dynamic force.

We are accustomed to think of our will as a determining factor in our lives, but the will only directs our conscious mind; it can influence the subconscious mind only indirectly through suggestion, or by courtesy of the subconscious. A suggestion has no dynamic force in itself and may or may not be accepted by the subconscious. A suggestion to be accepted and subsequently materialized must be assimilated by the subconscious, thus becoming an auto-suggestion. An auto-suggestion then is an idea implanted in oneself by oneself, which idea, be it good or bad, is then faithfully carried out and materialized by the subconscious to the best of its ability. That this is possible is due to two fundamental laws of the subconscious.

1. It is impossible to think of two things at the same time. Two ideas may be in juxtaposition but they cannot be superimposed in our minds.

2. Every thought or idea entirely filling our minds (an accepted or assimilated suggestion) becomes true for us and tends to transform itself into action; that is, the subconscious immediately begins to make the idea or belief a reality (shown in hypnosis).

These being the immutable laws governing the subconscious, it becomes inevitable that if you can make a sick person believe he is getting better, the subconscious, being credulous, accepts the idea or suggestion and immediately starts to work to materialize the belief by repairing any functional or organic derangement to the best of its ability.

There are three points I want to stress at the beginning of our discussion of mental therapeutics.

1. It is not a religion; it works just as well

in sinners as in saints, although religious emotion is a powerful psycho-dynamic stimulant.

2. It is not supernatural and breaks no law of nature.

3. No power outside the body has anything to do with the healing processes within.

The conception of this subconscious mind to which I wish particularly to call your attention, and which you may not have thought of in this light are:

1. Its relation to the so-called "Laws of Nature." These laws of life, growth, repair, reproduction, etc., we think of as having been laid down in the beginning by God or Nature, and in some mysterious way go on operating like a 70 year clock until accident or old age stop them. God, or the maker of the laws, having set them in operation, is generally thought of as having retired to some great distance, and paying no further attention to them, nor to our prayerful appeals to modify them when we think them painful or unjust. The important point to remember is that not only are the laws operative in all living processes, but that the operator, God or Nature, in the form of a mind, soul, spirit or psycho-dynamic force, which is all-wise and all-powerful is inherent in them, and more important still, as soon as we have mastered the principles underlying these laws, we can summon to our aid this inerrant wisdom and power when needed, as it was evidently intended that we should. To any who may think I am overstating the influence of the subconscious, that eminent Scotch scientist, Arthur Thompson, in his recent book, "What is Man," says "It does not seem possible to make sense of our mental life unless we utilize the concept of the subconscious mind."

2. The second conception of this force of subconscious mind that I want to leave with you is that its most important characteristic is its creative ability. Whether a thought, an idea or a mental picture which reaches the subconscious is dynamic itself or whether it furnished the necessary stimulant to the psycho-dynamic force is immaterial; the result is the same; that is, the thought, wish, idea or mental picture is materialized. This is a hard conception to grasp, but really no harder than the electrons, ether or other scientific theory.

If the science of medicine is to advance,

the future doctor will have to know more about the power of thought over our organs and functions and to recognize the stupendous fact that within ourselves resides the greatest and only curative principle, and more important still the fact that this force can be consciously directed. Ignorance can no longer be elevated to the dignity of skepticism. In this light the method of conscious auto-suggestion does not appear so foolish, but becomes a simple means of evoking the immediate and continual aid in times of physical, mental and moral stress of this intelligent force inherent in every living creature. There is nothing new or revolutionary in the assumption of this force. The father of medicine himself recognized and named it "Vis Medicatrix Naturae," which modern science has now changed to defensive forces of the body, or adaptive potentialities. The recognition of this mental, or vital force brings on again that ancient controversy, Vitalism vs. Materialism, and you must accept one or the other.

I see no way of escape, except it be not to think at all which, of course, is the easiest way and I regret to say the popular way with most of us; but as the object of this paper is to stimulate thought I am going to try to force a decision upon you. If you believe that "man is only a few painfulls of water and a handfull of ash," or, stated in more scientific detail, "fat enough for seven bars of soap, iron enough for a medium sized nail, sugar enough to fill a shaker, lime enough to whitewash a chicken coop, phosphorus enough to tip several boxes of matches, potassium enough to exploded a toy cannon, sulphur enough to rid a dog of fleas, with about 12 gallons of artificial sea water to keep this in solution," all of which materials being worth, at the present high cost of living, about 98 cents;—that is your privilege. If you can believe that thought, love, anger, patriotism, altruism and all the emotions that surge through and govern the actions of a living, throbbing human personality can, by some mysterious reaction or chance collocation of chemical elements, be evolved from that 98 cents worth of inorganic matter, the outlook for the further advances of our civilization can hardly be called brilliant.

In a recent paper entitled "The Message of Psychiatry to General Medicine," Dr. Wm.

A. White, of Washington, makes the point that man should be studied as a whole, as a unity, rather than as a problem of physiology alone. He says, "As the bodily structures of man can be traced back in uninterrupted series to the simple ameba, so the psyche of man can be traced to similar simple origins. It means in short, that the psyche is as old as the soma; that in the very beginning of life the foundations were laid down that later developed into man with the two-fold aspect of body and mind; it means that psychology, quite as truly as physiology, is a biological science. This concept that the histories of the psyche and soma are contemporaneous, that mind and body as such are but different aspects of life itself, is, I believe, the most pregnant concept which psychiatry has come to realize and which it is slowly forcing to be generally recognized."

"Its significance for general medicine lies in the fact that almost wholly, medicine is occupied with the problems of the body, the soma; and it has devolved upon psychiatry to point out the one-sidedness and consequent danger of this restricted point of view. Is it not time that mind should have a place in the physician's consideration of his patient every whit as important as his body?" If it be true, as Dr. White says, that "The psyche is as old as the soma," it would seem to supply the "missing link" sought by Professor Osborne, who says, "The spiritual qualities of man cannot be accounted for by purely evolutionary processes, and all psychic faculties of man are new attributes of the human race without organic antecedents and not to be accounted for by evolution." The psychic faculties of man, by their very nature, could not leave any "Record in the Rocks," as has his organic characteristics; so must be sought in the realm of the mind. In this light what tremendous import the subject assumes both to science and religion!

That bodily reactions are affected by mental stimuli has been scientifically proved beyond all doubt. Pawlow proved by actual experiment that the mere showing of the whip to the dog suppressed the flow of gastric juice, thus demonstrating the power of the thought of punishment to inhibit the flow of this secretion. Luckhardt and Johnson (American Journal of Physiology—Sept. 1924), experimenting along the same lines, found that sug-

gestion of a test meal under hypnosis causes a "secretion curve with acidities equally high as when the test meal is actually given."

Crole and Cannon have shown that the emotions of fright and worry will exhaust the adrenal glands, while it is well known that anger will affect the sugar content of the diabetic's blood. It must have been the clinical observation of you all that the emotions,—hate, anger, fear, worry, grief,—affect the body through the mind and are disturbing, harmful and distractive influences, while joy, love, hope, etc., are stimulating, energizing and constructive influences. Physics and chemistry have been of great assistance in gaining our knowledge of the workings of the human body, but as the evolutionary processes advance they become insufficient to satisfy, so biology and psychology must be called in. Biological knowledge gives human nature the prominence of control over itself.

We thought Dr. Cannon's observations and experiments in regard to the influence of emotions on bodily functions were original, but Pythagoras seems to have anticipated them by thousands of years. How else can we interpret his words:

"Hate and fear breed a poison in the blood, which, if continued, affects eyes, ears, nose and the organs of digestion. Therefore, it is not wise to hear the unkind things that others may say of us."

Now, let us consider for a moment what the authorities of medicine (for many doctors do little thinking of their own and are strong for authority); from father Hippocrates down to the Mayos, think of reparative powers of Nature, "*Vis Medicatrix Naturae*" or the modern subconscious mind. All the teaching of Hippocrates center in the aphorism "Nature the healer of our diseases," which means nothing if not a psycho-dynamic force within our bodies. Galen said, "When the imagination of a sick man has been struck with the idea of a remedy, which of itself is without efficacy, it becomes endowed with beneficial powers." See how closely the great Osler followed these ancient masters. "The psychical method has always played an important, though unrecognized, part in therapeutics. It is from the faith which buoys up the spirits, sets the blood freely flowing and the nerves playing their part without disturbance that a large part of the cure arises. The

basis of the entire profession of medicine is faith in the doctor, his drugs and his methods." Harvey Cushing, in a recent address, said:

"The acknowledged self-limitation of many diseases, followed by the success of homeopathy and later by Eddyism and now by Coueism and healing by prayer is slowly forcing upon the profession the therapeutic importance of a long neglected force widely employed in Esculapian temples. The influence of mind upon bodily ailments, particularly those so-called neuroses, which comprise such a large part of human ailments."

W. J. Mayo in an editorial entitled "Apprehension," said "because thought cannot be measured and weighed it is regarded as non-existent and immaterial. It has been said that apprehension not justified by the event is the cause of three-fourths of the sorrow and tribulation of the world. The three greatest enemies of the human race are tuberculosis, cancer and the so-called neuroses." At another time (A. M. A., 1-27-23), in speaking of tuberculosis, he said in effect that the bacteria were more resistant to medication than the human organism itself, and if a cure is effected it is through self engendered immunizing substances. So it ill becomes us to neglect any clue that may lead us to Nature's secret of the modus operandi of this mysterious manufacturer of these all important immunizing substances within us.

The terrible increase of cancer is familiar to you all. The master minds of the profession are diligently working to find the cause and cure. Dr. Luten of the Mayo Clinic in a paper entitled "Progress in Cancer Research" says: "The complete and spontaneous regression of inoperable malignant tumors in 100 well authenticated cases is conclusive evidence that the human body can wage a winning war against malignancy." Dr. O. Strauss, of Berlin, is appealing to all physicians to aid him in completing and studying instances of the spontaneous cure of malignant disease. McCarty says, "My observations have revealed a biological reaction which is malignant only in so far as it destroys the communistic organization of the cells; in fact, many biologists are of the opinion that exposure of living matter to destructive factors has lead to adaptive potentialities that are

factors of safety in the structure and functions of all forms of life. Nature has been just as efficient in her defensive preparations as in the construction of the human body." Dr. Blair Bell's recent views on cancer must likewise be based upon the intelligence of the cell, for he says, "If in the mature life of a group of cells there comes again a time when they are involved in a struggle for existence they revert to their embryonic type when they ate into the maternal tissues; thus cells may be thought of as retaining memories of their earliest life when their struggle for existence had just started and was at its keenest—a biological atavism or throwback." Does not all of this plainly imply intelligence in the living cells? Can you conceive of anything without intelligence having a communistic organization or putting up any kind of defense, to say nothing of memory. It simply means that life and mind are inseparable, and the essential characteristic of a cell is that it is a mind organism.

All psychologists admit that the so-called neuroses, last of the deadly trio, can only be successfully treated through the mind. Here, then, we have the three greatest enemies of the human race, tuberculosis, cancer and the neuroses, admittedly mastered by this mysterious force inherent in every living creature. Isn't it time we dropped the ridicule and supercilious disdain stuff and do some scientific orientation into primary causes instead of continually fussing with end results? How long is the profession going to ignore this remarkable and admittedly effective therapeutic influence constantly suggested to them by the most eminent men through the ages? Is this disregard caused by perverseness, prejudice or preconceived ideas? It cannot be due to ignorance. Does it not appear, at least, to be a good working hypothesis to assume that the subconscious mind is the agent through which all healing is brought about, whether it be the faith in the doctor, his drugs or his methods, the grotto of Lourdes, the bones of St. Anne, so-called Christian Science, the tom tom of the Indian doctor, the manipulations of our drugless cults, or healing by prayer. Is it not evident that the healing of disease and the perpetuation of life itself is only a difference of degree and not of kind? I would not insult your intelligence by suggesting for a moment that

God or Nature uses different methods and laws of healing for different races, religious creeds, sects or cults.

Before leaving this part of the subject let me draw your attention to a few interesting incidents in the lower animals, showing the wonderful power of the subconscious mind in them and how they make use of it in their daily activities. You are probably familiar with the experiments of Dr. Paul Kammerer with salamanders, how he shows that they can change the color of their backs to suit the changing background, a bit of protective camouflage not excelled by humans in the late war. Another interesting exhibition of the power of the subconscious mind to accurately create the mental picture made by the conscious mind is shown in the cuckoo—the "flapper" of bird society. As you know, she builds no nest; nor does she hatch out any eggs; but she is a practical psychologist. She watches her chance when some mother bird leaves her nest, gives that nest of eggs a careful "once over" to see if they correspond with her own in size, color and markings? She then proceeds to lay an egg which she puts in the other bird's nest to be hatched out with her own;—some bird, I'll say? This instance seems even more remarkable from the fact that it is not as a protective measure but shows a cleverness in avoiding household duties that would be a credit to a modern business woman. Nature is replete with instances of this inherent psycho-dynamism and cell intelligence. This view has been scientifically confirmed only recently by Professor Osborne, who formulates two new laws from the record of the rocks or the interpretation of fossils:

First—That every animal fits itself to new modes of life by modifying its own structure and activities from generation to generation;

Second—That these characters from the beginning take a course directed towards their future fitness.

If this means anything, it means that the Divinity which shapes our ends is within us, and that its actions are intelligent and purposeful. Man is now the highest expression of nature and he has attained to his position by the unconscious workings of the evolutionary forces rather than by any conscious effort on his part. I feel sure that man is destined to evolve to a much higher plane,

but this can only be accomplished by his conscious wish and desire brought about by his cooperation and understanding of the laws of his psychic nature and the intelligent application of those laws. This view is sustained by F. Arthur Thompson in "What is Man," already quoted, in which he says in conclusion, "Science does not look for marked changes in man's bodily structure, but sees no reason to think that his brain has reached the end of its evolution, as there are many areas for which we have found no use as yet. Nature may not work great changes in man, but he is now in position to work great changes in himself."

While this thought, the further evolution of the brain, is not strictly germane to my subject of the healing powers of the mind, it opens up such a fascinating vista of the tremendous possibilities towards the onward and upward progress of the race, that I beg indulgence a few moments more just to touch upon it. This line of thought is bringing out the astonishing fact that the ability of the mind to heal bodily ailments is a very small affair, to the unlimited possibilities of its wonderful creative faculty in every condition of life. That mental force which has raised the Moneron to Man in his evolutionary journey will eventually evolve man to immortality. In human evolution from now on a new and higher factor may be added, which is the conscious voluntary cooperation of the human psyche in the work of its own evolution through our understanding and intelligent application of these laws of the subconscious mind. In Biblical terms this is called faith, scientifically it is psycho-dynamic force. The name is immaterial; the point to grasp is that it is our most powerful human faculty; projective thought which grips the unseen and pulls it into actual expression. We have the power within us, the psycho-dynamism, and all we need is the wish, desire and persistence to develop it. As Dr. Roy Wilbur, Ex. Pres. A. M. A., says, "The rules of biology work all the time. They are as sure as the rules that control electricity and falling bodies. The duty of medicine is to learn the rules and help man to meet them. History is full of the biological mistakes of civilized nations. We are digging them up every year." They cultivated the soma and neglected the psyche.

Will our civilization make the same mistake and add one more to the list of dead peoples?

It is along this route that the evolutionary processes are slowly tending towards the fulfillment of that Biblical promise of "Knowledge that shall make you free." This knowledge can be no other than that man's psyche is not only as old as his soma, but that it was its creator, and will eventually stand revealed as the dominating force or creative energy through whose influence man will rise above his present conception that matter is master. Man is organic to Nature. Instead of interpreting mind in terms of matter, you must interpret the whole process of physical evolution in terms of that in which it culminates—that is mind. This vicious circle of materialism that is keeping civilization from its psychical heritage can only be broken by mental expansion, by thinking, and what class of men are more fitted to promulgate thought along those lines than doctors?

Who among you do not recognize deep in your hearts that human beings do consist of more than "a pailful of water and a handful of ash;" that there is a spirit, soul or subconscious mind to be reckoned with that cannot be seen through the microscope or distilled by chemical analysis? Why not admit a supreme spiritual or psychic director of the human body, omniscient, omnipotent and omnipresent? If you believe in a God who regulates everything, then I see no scientific or religious reason why you should not also believe that this psyche should be His agent or engineer, if not a part of Himself, and accept that Biblical aphorism "In Him we live, move and have our being," as a definite scientific fact and not a poetic expression or a religious legend.

Mr. Rudyard Kipling, at a Medical meeting in London, related a story so fitting to this connection that I am going to ask your indulgence that I may pass it on to you. He said: "There is a legend which has been transmitted to us from the remotest ages. It has entered into many brains and colored not a few creeds, it is this: 'Once upon a time, or rather, at the very birth of time, when the Gods were so new that they had no names, and Man was still damp from the clay of the pit whence he had been digged, Man claimed that he, too, was in some sort, a deity. The Gods weighed his evidence and decided that

Man's claim was good—that he was, in effect, a divinity, and as such, entitled to be freed from the trammels of more brute instinct, to enjoy the consequences of his own acts. But the Gods sell everything at a price. Having conceded Man's claim, the legend goes that they came by stealth and stole away this godhead, with intent to hide it where Man should never find it again. But this was none so easy. If they hid it anywhere on Earth, the Gods foresaw that Man, the inveterate hunter, the father, you might say, of all hunters, would leave no stone unturned or wave unplumbed till he had recovered it. If they concealed it among themselves, they feared that Man might in the end batter his way up even to the skies. And, while they were all thus at a stand Brahm, the wisest of the Gods, said, 'I know. Give it to me!' And he closed his hand upon the tiny unstable light of Man's stolen godhead, and when that great hand opened again, the light was gone. 'All is well,' said Brahm, 'I have hidden it where Man will never dream of looking for it. I have hidden it inside Man himself.' 'Yes, but whereabouts inside Man have you hidden it?' all the other Gods asked. 'Ah,' said Brahm, 'that is my secret, and always will be unless and until Man discovers it for himself.' 'Will he ever discover it? Surely, but how soon will depend upon how much thought he is willing to expend upon it. The priests and philosophers of old soon gave up the search and concluded that it was outside the body of man—supernatural—but the medical man has persisted until he has explored every area and organ of the body and is now plumbing the "shadowy profundities of the mind." This is a promising trail, and if he will use the searchlight of scientific research in this field as diligently, fearlessly and without prejudice as he has in others, he will eventually find that ultimate secret of his being, hid within his own body by the crafty Brahm. As an evidence that we are getting hot on the trail, after searching the three kingdoms for remedies for disease, we are now discovering that the most potent ones are within our own bodies, the internal secretions.

There is no inherent positive force making for progress aside from the expansion of knowledge. No profession or body of men are more eager in the pursuit and expansion

of knowledge than physicians, but there seems to be at the bottom of each of us a timid conservatism which accepts progress reluctantly and which fears the consequences of new ideas before knowing just what they are or where they will lead. Truth is the goal wherever it leads.

Walter Bagot speaks of "the pain of a new idea," how it disturbs our old ideas, and whether they can rearrange themselves to accommodate the newcomer or must vacate. We all experience it. To lessen this pain, I have tried to introduce this idea with a bit of local anesthesia in the way of its great antiquity, and its general acceptance by medical science, both ancient and modern.

In this conception, the psycho-dynamism controls the individual. Our cherished chemical reaction, blood sugar and internal secretions are not disturbed, they are controlled by the directing idea, the psyche. Thus science will come to the aid of religion by proving, as a fact, what religion has taken on faith.

Psychologists, physiologists, fundamentalists and modernists can all meet on this common ground, and even the late Mr. Bryan and the Kentucky Legislature might have been placated; but this felicitous state all depends upon the plasticity of mind or the ability to change one's mind to meet expansion of knowledge.

To help you arrive at this plasticity of mind, the advice and philosophy of J. Harvey Robinson in "Mind in the Making," will prove stimulating; he says "Most of our so-called reasoning consists in arguments for going on believing as we do; what we need is a reconstruction of mind." We must create an unprecedented mental attitude to cope with unprecedented conditions, and to use unprecedented knowledge. It is not the defense of our cherished beliefs and prejudices just because they are our own; mere plausible excuses for remaining of the same mind. On the contrary it is that particular species of thought which leads us to *change our minds*. It is that kind of thought that has raised men from ignorance and squalor to the degree of knowledge and comfort he now possesses. We are rising above a conception of life in which matter is master. The ascent is slow, but surely it can be hastened by our conscious cooperation and understanding of the psychic laws of our dual nature.

HEMORRHAGIC PLEURISY: REPORT OF A CASE*

C. LYDON HARRELL, M.D., Norfolk

Hemorrhagic pleurisy, as described by Osler, is a bloody effusion in the pleural cavity. It is met with in the pleurisies of asthenic states such as cancer, Bright's disease, occasionally in the malignant fevers, cirrhosis of the liver, tuberculous pleurisy, and occasionally in a healthy individual. According to Osler, hemorrhagic pleurisy must be distinguished from hemothorax, the latter, according to his classification, being due to the rupture of an aneurysm or the pressure of a tumor on the thoracic veins.

D'caulafoy classified the causes of hemorrhagic pleurisy in four groups. In his first three groups he mentions all the causes as mentioned by Osler, but adds the acute infections, as influenza or pneumonia. The fourth group he calls "pleural hematoma." The real cause is unknown, the symptoms are those of a simple acute pleurisy; they usually yield to one or two aspirations and are very rare.

The more recent writers use the term "hemothorax" to describe the presence of blood in the pleural cavity regardless of its origin, but referring chiefly to cancer of lung and pleura and to penetrating wounds of the chest wall.

I searched the references and literature in our library back to 1900 and also wrote Tice for information. The only case I found that was at all similar to the one I am about to report was a case seen by Dr. F. T. Billings, of Pittsburg: a white, male, age 35. Had a moderately advanced case of tuberculosis of left lung for which he had been treating him some time. He was able to attend to routine business. Early one morning he raised some streaked sputum, and called his physician. When Dr. Billings arrived he found the man in a quite nervous state, temp. 98, pulse 84. Chest findings were about same as on previous examination, there was no evidence of fluid. About fifteen minutes after the physician arrived the man was taken with a severe pain low down in the left axillary region. His pulse immediately jumped to

130, very weak. He had symptoms of shock or hemorrhage. The physician used the necessary measures to get him quiet and left. The man died that afternoon. No autopsy was obtained, but a large trocar was inserted in the pleural cavity and forty ounces of blood was withdrawn.

During my brief experience of sixteen years I have aspirated or assisted in many cases, but so far as I recall and my records show, obtained bloody fluid in only five cases. One was in a case of Hodgkin's disease, two were cancer of the lung, one due to trauma resulting from gunshot wound of the chest, one hemorrhagic pleurisy. The first three cases have been mentioned in a previous paper, the last case, an extremely interesting one to me, is responsible for this paper.

Mr. S., white, male, age 22; occupation, undertaker. Was referred to me for chest examination on April 14, 1925, by Dr. C. J. Andrews. The man came in complaining of pain in lower right chest, made worse by forced breathing, was rather weak and tired easily on exertion. Dr. Andrews was first called to see him about ten days previously for acute pain in right chest and abdomen. He suspected an acute appendicitis, gave him something for his pain and put him to bed. His temperature was normal at this time. The next day his pain had localized to lower right chest, he had a temperature of 102 and continued to run some temperature for several days.

His mother was living and well. Father died in a sanatorium two years previously of pulmonary and laryngeal tuberculosis. His past history was negative except for influenza in 1918. He was the only child and had always been very thin. When first seen by me he had a temperature of 99.3 at 11 a. m.; pulse 96-108. Height 69 in., weight 117 lbs.; best weight 130 lbs.; blood pressure 110/65.

Examination revealed a tall, thin and undernourished man. The tonsils were small and buried. He had several bad teeth and some pyorrhea. Chest was long and shallow;

*Read before the Norfolk County Medical Society, January 18, 1926.

expansion was poor, with lagging at the right. Tactile fremitus was diminished over the lower right lobe. On percussion there was found dullness from sixth rib down in front. Under the right axilla a flat note was obtained from sixth rib to base. In the back dullness started at seventh dorsal spine and faded into a flat note at base. In the second and third interspaces front, a friction rub was heard and a few rales, also a few rales above the dull area in back. There were practically no breath sounds coming through from angle of scapula down.

Lab. Findings: hgbn. 72%; r. b. c. 3,250,000; w. b. c. 19,800; polys 79%; small monos 14, large monos 1, transitionals 3. Blood Wassermann negative. Urine: neg. to albumin and sugar, 3 pus cells to a field and an occasional red cell. Sputum neg. for tubercle bacilli.

Diagnosis: Pleurisy with effusion. Advised aspiration.

On April 17, approximately two weeks from the time he was first taken, I aspirated 450 c.c. of dark red fluid, which had the appearance of almost pure blood. Specific gravity .1027. I regret I did not do a cell count on this fluid. On culture we got a rather heavy growth of diplococcus that resembled pneumococcus. After removing the fluid I allowed a small quantity of air to enter the cavity to act as a buffer. X-ray examination made by Dr. Hunter showed a cloudy area at right base, which suggested encysted fluid. I strapped his chest and put him to bed. On April 23 I removed 515 c.c. of fluid of about the same consistency as the first. On culture we got no growth. He was given 5 c.c. of 5% solution of calcium chloride intravenously. His arm was very much irritated, probably a few drops got out in the tissues. This was followed up by 30 grains daily by mouth. On May 4, 75 c.c. of fluid removed, a little lighter in color than the first. Injected 100 c.c. of air in the pleural cavity to separate the two layers of the pleura and had another picture made; this was practically negative. The leucocyte count had dropped to 8,450.

I re-examined him in June; no rales were heard. Breath sounds were coming through but were distant over lower right lobe, back. He was permitted to return to work.

On January 12, 1926, about nine months

after initial attack, I ordered him up for another examination. The man states that he has been hard at work since I discharged him last summer. He looks as well as usual and says he feels well. Pulse 76, temp. 98, weight 117 lbs. Teeth being treated. Chest findings are practically negative. Breath sounds were distinctly heard throughout right lung, with only an occasional sticky rale at extreme base. X-ray picture made January 14, 1926, was negative. It looks as clear as any adult's chest.

Lab. Findings: Blood, hgbn. 76%; r. b. c. 4,630,000; w. b. c. 7,750; polys 65; small monos 33; eosin. 2. Urine negative for albumin and sugar.

COMMENT

My first impression of this case after aspiration was that I was dealing with a malignant condition, or possibly tuberculosis. The sudden onset was against malignancy, the x-ray picture did not suggest either. The patient being an undertaker, I talked the case over with him rather freely, the probabilities and possibilities. He stated that on numerous occasions he had opened the thoracic cavities of subjects dying of influenza and pneumonia and found large quantities of bloody fluid in the cavity.

The first aspirated fluid yielded a pure growth of diplococcus. This might have been a contamination; I do not know. All cultures thereafter were negative. I expected the case to develop into empyema; instead it cleared up rather early, about four weeks from the onset.

CONCLUSIONS

1. Nine months from the initial attack, from all appearances the man was well.
2. An x-ray picture of the chest taken January 14, 1926, was clear. This ruled out malignancy and tuberculosis.
3. According to Osler and to Dieulafoy this must have been an acute case of hemorrhagic pleurisy, exact cause not determined; in all probability due to some acute infection of the lung which was not detected at the time.

REFERENCES

- Osler, Practice of Medicine.
Dieulafoy, Practice of Medicine.
F. T. Billings, Journal, A. M. A., May 30, 1908.
Tice's Abstracts.
Note: Mr. S. came in July 6, 1926, to be

re-examined, prior to having tonsils removed. They had been giving him trouble for some time.

Chest negative. No moisture or rales

heard. Breath sounds coming through at the base. Pulse 84. Temperature 99 (hot after-noon). Weight 112½ lbs.

THE CANCER PROBLEM

JAMES W. DAVIS, M.D., Statesville

More than 100,000 people die annually in the United States from cancer. A large per cent of these patients could be saved by an early diagnosis and prompt treatment.

Statistics show that there is a definite increase each year in the mortality from cancer. This, together with the fact that such a large number of people succumb each year to this disease, makes it one of the most important subjects with which the human race has to contend at the present time.

The following organs in the order named are the ones most commonly affected:

- (1) Stomach and liver
- (2) Female generative organs
- (3) Peritoneum, intestines and rectum
- (4) Female breast
- (5) Buccal cavity
- (6) Skin
- (7) Other parts of the body not included in the above.

Since January 1st this year there have come into this clinic a large number of cases of inoperable carcinoma and on careful inquiry into the history of each case, in practically every instance the patient was responsible for the delayed diagnosis. Failure to consult a doctor is certainly the greatest factor in the delayed cases.

Women will often conceal for months or even years the fact that they have a lump in the breast. Not until it begins to grow rapidly and cause pain, do they consult a doctor. Others have bleeding between the periods at or about the age at which they think the change of life takes place. They attribute the irregular bleeding to the beginning of the menopause and allow this to go on for months until there is a carcinoma of the cer-

vix which is too far advanced for operation. They thus throw away their chances of a cure. Then, when they consult their doctor, it is too late for relief by surgical treatment.

Men often neglect chronic stomach trouble until there is a rapid loss of weight and signs of a pyloric obstruction, and perhaps even the appearance of a tumor which heralds an inoperable carcinoma of the stomach.

The greatest factor in the reduction in mortality from cancer is early diagnosis and prompt treatment. Physicians no longer hesitate to make a provisional diagnosis of carcinoma or of a precancerous condition, and call for consultation. An experienced consultant after a thorough examination of the patient, aided by an x-ray examination of the gastro-intestinal tract and other special examinations, may decide that the condition is not cancerous. This will be no reflection on the physician, but the patient will be deeply grateful because of the fact that the physician has used every precaution in ruling out malignancy. It has been my experience with the physicians in this section that the diagnoses which they make are usually correct even where their means for special examinations are limited. By obtaining careful histories of the cases and making what examinations they can under the circumstances, they arrive at diagnoses which are found to be correct in nearly every instance. Certain conditions which are classified as precancerous, such as a tear and erosion of the cervix, irritated moles or small tumors in the breast, should come in for diagnosis as possible precancerous conditions.

Only by the education of the public to the gravity of the situation can anything be

accomplished. This is progressing fairly satisfactorily, but requires much work, tact and perseverance on the part of the medical profession and the laymen who are so generously and enthusiastically assisting in this great campaign. When once the public is acquainted with the fact that there is an increase in cancer deaths each year and that early diagnosis is the only means of effecting a cure, we will have fewer and fewer cases coming in for examination after it is too late.

A most important thing is the recognition of precancerous conditions and those borderline cases which are sometimes difficult to diagnose accurately, but which we know will ultimately become cancers. Often where a clear-cut diagnosis of cancer can be made, it is too late for treatment.

From the standpoint of the medical profession an early diagnosis of cancer often depends on a very careful and thorough study of the patient. An examination of this kind may require days, particularly where an x-ray of the gastro-intestinal tract is necessary. This should be explained to the patient and his cooperation secured. The examination is begun by a careful history and a thorough general examination. When the point of trouble is located, every possible diagnostic means should be brought to bear on this particular area. For example, in the case of a suspected carcinoma of the uterus where the only sign is a slight metrorrhagia, a careful bimanual examination should be made followed by a careful inspection of the cervix through a well lighted speculum. A very early diagnosis can sometimes be made by inspection where only the cervix itself is involved. Failing in this a diagnostic dilatation and curettement is often of invaluable aid. A careful microscopic examination of the uterine curettings by a competent pathologist will often reveal a very early malignancy. If necessary a section may be taken from the cervix for pathological examination provided an immediate diagnosis is made and prompt treatment instituted where malignancy is found.

In the case of the stomach any prolonged gastric condition should be sufficient to warrant a very thorough and exhaustive examination by every possible means known, including fractional test meals and a thorough x-ray examination, repeated if necessary to

establish a diagnosis.

When once a diagnosis of early malignancy is made, the patient should be advised, in a tactful way but in no uncertain terms of the exact condition present, and the treatment needed. The patient must be made to understand the seriousness of the situation and that prompt and radical treatment is absolutely necessary.

The treatment of early cases should be instituted promptly. Here the full cooperation of the patient, the patient's family and immediate friends is of the greatest help.

These cases which come for diagnosis after the cancer has reached an advanced stage present one of the greatest problems with which we have to deal, particularly in those cases in which a radical surgical operation would only hasten the end. In most cases it is advisable to acquaint the patient with the exact condition present and the probable outcome. In rare instances it may not be advisable to tell the patient everything, but always the family should be acquainted with the condition present so that the proper treatment may be begun at once and the patient's remaining days made as comfortable as possible. Where a radical operation is useless but a palliative operation would give some temporary relief, the patient, the family and friends should be thoroughly acquainted with this fact. To a patient who undergoes even a palliative operation which is only done for the purpose of mitigating suffering, a careful explanation should be made; also the family and friends should be acquainted with the facts so that they will not expect a cure. It is not uncommon to hear a patient who has an advanced cancer say, "I didn't go to a doctor because so and so had an operation for cancer and he died," when perhaps the only operation he had was a palliative one. Always, it should be made plain to patients, family and friends just exactly what they may expect, so that other patients will not feel that surgery offers no hope.

Certain palliative surgical procedures in the incurable cases often give great comfort and relief to the patient particularly when combined with deep x-ray therapy. In carcinoma of the cervix, cauterization with an electric cautery preceded and followed by deep therapy gives the greatest possible re-

lief. The cauterization can be done under sacral anesthesia without any particular pain or shock to the patient.

In carcinoma of the breast with evident metastasis to the axilla a careful stereoscopic x-ray of the chest should be made to see if there is any metastasis inside the thorax. Deep x-ray therapy should be given, followed if possible by an excision of the breast under local anesthesia. The enlarged axillary nodes should be removed; but in these cases the classical, radical operation for carcinoma of the breast is not advisable. Where the metastases are beyond reach a cure is practically impossible. To clean out the axilla in the usual way causes, when healing takes place, the formation of a lot of fibrous tissue, and the subsequent contraction of this tissue by pressure on the nerves and blood vessels, causes pain and chronic congestion and swelling of the entire arm; altogether one of the most agonizing conditions with which we have to deal. Then the metastases in other parts of the body continue to grow and add to the pain and disability. In these hopeless cases simple excision of the gross cancerous growth and enlarged axillary nodes, without any attempt to remove the pectoral muscles or clean out the axilla, will relieve the patient of the distress from a suppurating growth and the consequent toxemia and disagreeable foul discharge. This, of course, should be preceded and followed by deep x-ray therapy given by a competent man. This will, in a large per cent of cases, greatly prolong the patient's life, give a great deal of comfort and save much of the keen agony which they would otherwise endure before the end is reached.

In cases of inoperable cancer of the stomach, deep therapy followed by a gastro-enterostomy done under local anesthesia will often prolong life and make the patient's last days much easier.

Both radium and x-ray treatments have their advocates. My experience is that a water-cooled Coolidge tube and an x-ray machine which permits the dosage to be accurately given, in the hands of a competent man, give the best possible results. Even in carcinoma of the cervix, where radium would naturally be applied to the seat of the disease, the x-ray has given better results.

Patients who have inoperable and incurable cancer should be kept out of the hands of quacks, and should be warned against the so-called cancer "cures." They should be taken in hand by their physician and everything possible done for their comfort. Here the cooperation of the family and friends is of the greatest help. Whenever necessary drugs should be given to relieve pain and in sufficient amounts to actually make the patient comfortable. A comfortable airy room, books, magazines, telephone, radio, victrola, games and such things help to divert a patient's mind from his disease. These, in addition to the fact that the patient realizes that everything possible is being done to relieve suffering will make the situation far less trying for the patient, the family, friends and the doctor.

CONCLUSIONS

- (1) A large percentage of the patients who die each year from cancer can be saved from cancer deaths by early diagnosis and treatment
- (2) Patients who neglect to consult a doctor in time are principally responsible for the present high mortality
- (3) Education of the public will gradually insure cooperation, early diagnosis, earlier treatment and a reduction in mortality
- (4) The inoperable, incurable patients should be given the benefit of everything possible which will add to their comfort and make their remaining days less painful.



THE CARE OF THE TUBERCULOUS PATIENT AFTER LEAVING THE SANATORIUM*

JAMES W. DICKIE, M.D., Southern Pines

In any case of tuberculosis recovery depends upon a reasonably early diagnosis, followed by treatment preferably in a sanatorium under competent medical supervision until the disease is arrested, and then by proper supervision of the patient after discharge.

I shall first discuss briefly the treatment in the sanatorium, because it is so closely allied to the care and supervision of the patient afterward.

The best sanatoria leave much to be desired. However, the average sanatorium offers superior advantages to anyone with active tuberculosis. Physicians treating large groups of patients under identical climatic conditions have an opportunity to observe the advantages to the patient of treatment in a sanatorium, over that in a private home.

The mistake most frequently made is a needless delay in seeking institutional treatment. The patient almost invariably seeks such care when his condition becomes desperate. If the importance of early treatment is impressed upon him, and he is made to realize that one goes to a sanatorium to get well, not to die, he may, in most cases, be induced to go early.

With very few exceptions, the results of proper sanatorium treatment are most gratifying, where a reasonably early diagnosis has been made. The patient may as well know at the beginning, that the period of treatment required is all the way from five months to two years, depending on the extent of the involvement, the degree of activity, the resistance of the individual to tuberculosis, and his ability to adapt himself to the cure.

Frequently, patients leave before a result is obtained, or, they go from one sanatorium to another, usually with results disappointing both to the patient and the sanatoria concerned. They are often encouraged to act thus by well meaning friends and relatives.

Every patient can find a plausible excuse to leave if he wills to do so. Frequently financial embarrassment is the reason given; yet it is significant that desperately ill patients are rarely forced to leave on this account.

If the period of treatment be divided into three stages—bed rest, chair rest, and graduated exercise,—it is of the greatest importance for the patient to remain in the sanatorium during the period of graduated exercise, under the closest supervision, where every hour of the twenty-four is accounted for. It is difficult to explain satisfactorily to a patient and his family the necessity for continued institutional cure after all symptoms have subsided; especially when there has been a gain in weight of from fifteen to fifty pounds and the patient looks and feels better than ever before in his life. The patient usually reaches this point of the cure by the time he has completed the period of bed rest and chair rest and before he has begun the very important exercise period. At frequent intervals, while the patient's exercise is being increased, a careful chest examination by a competent physician is necessary. The difference between omitting or completing the third stage of the cure, is often the difference between a permanent cure and a temporary arrest. After an early return home "patched up," many patients break down again in a few months or a few years, and must return to the sanatorium when most likely it is too late to effect a cure. Such cases represent a very large percentage of the fatalities in institutional practice.

With the exception of a small percentage of cases where we resort to such measures as tuberculin, heliotherapy, thoracoplasty, and pneumothorax, the treatment is so simple that it is difficult to convince the patient of its importance; yet its simplicity is its virtue.

The question is often asked: Is there a specific for tuberculosis? The answer is, Yes. The specific is rest. In truth I regard it as near a specific as we have in the field of medi-

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cine. Not rest in the sense of stopping work and "taking it easy," but rest as it is used in treating a fracture. Then we immobilize the part by the use of a cast or splints. Nature also protects the man with a fractured bone; for, in the attempt to use the part, such pain results as to force complete rest while the tissues are healing. This is not true in the case of a diseased lung where the patient has little or no discomfort. If complete rest is necessary to obtain the best result where the tissue is merely the seat of an injury, how much more necessary it is, then, where the tissue, as in the case of tuberculosis, labors under the greater handicap of being diseased!

The period of complete bed rest must continue until the disease is quiescent, whether the time required be six weeks, six months, or longer. The end of this period may be determined by a careful chest examination in conjunction with stereoscopic x-ray films of the lungs. If the average case requires eight months in the sanatorium, about half of that time is taken up by the bed rest period.

The period of bed rest is followed by a period of chair rest, of from six to twelve weeks, depending on the length of time spent at rest in bed, on the nature and extent of original involvement, and on the reaction to chair rest.

The period of chair rest is followed by a period of graduated exercise, which requires a minimum of two months. Before leaving the sanatorium the patient should be taking at least one and one-half hours' exercise a day. The exercise period determines the patient's limitations; how much he is going to be able to do and how safe he is going to be in doing it. The patient gets his result in bed—the exercise period determines whether he keeps it or loses it.

There is no "diet" for tuberculosis. In the absence of any complications, patients do best on wholesome, nourishing food, such as normal healthy people enjoy, with the addition of from a quart to a quart and a half of milk a day. The routine use of raw eggs, the old stand-by of former days, is to be severely condemned. Very few healthy people can properly assimilate any large number of raw eggs for any length of time, and the effect of several raw eggs a day on a patient's appetite is disastrous.

Dry, fresh air in an invigorating climate with an abundance of sunshine is an important aid to treatment. Sanatoria are usually so located and constructed as to give patients the greatest advantage in this respect.

To sum up, properly regulated rest and exercise, proper nourishment, fresh air and sunshine are our most dependable weapons against tuberculosis.

The patient, leaving the sanatorium as an arrested case of tuberculosis, has learned the significance of the word *rest* and its importance. He has experienced the well-being which results from taking proper nourishment at regular hours; he no longer feels comfortable or at ease in a poorly ventilated building, and he knows the joys of a sleeping porch, regardless of the season; he has learned a rare lesson which will go far towards insuring his success in after years, namely, self control.

Of immediate concern to him is the advisability of returning to his former home, his greatest anxiety is about climatic conditions. In recent years we have changed our ideas about climate. It is no longer the prime requisite to the patient leaving the sanatorium. Rest, not climate, is now the pre-eminent consideration in treatment; and the patient's activity or occupation is the great consideration after leaving the sanatorium. To be sure, some discretion must be used; but it is safe to say the tuberculous individual, with his disease thoroughly arrested, may live in any climate suitable for the average well person. The patient who returns home from the West or any of the well known health resorts in the East and has a relapse, does so not because of climatic conditions at his home. He may look the picture of health but, in tuberculosis, there is nothing more deceptive than appearances. Sometimes he has not completed his cure and his disease is not arrested. Many times he returns to the environment and occupation which precipitated his illness in the first place, and tries to make up for lost time. In truth, what counts is this: not *where* they live, but *how* they live.

Whenever possible, a period of from one to three months and sometimes more should elapse between the time the patient leaves the sanatorium and when he resumes his regular occupation. He needs this period to

readjust himself.

We have also changed our ideas about the occupation of the ex-patient. We used to regard outdoor work as best, nay as essential, regardless of how strenuous it might be. The bookkeeper was advised to become a cowboy, the banker a farmer. Experience has taught that this may be the worst possible advice. The ex-patient must avoid any work which requires excessive physical effort. Sedentary occupations are very much to be preferred, such as writing, teaching, bookkeeping, banking and the like. The hours of labor must be rational. A normal, healthy man is not at his best for any considerable period of time if he attempts to do more than eight hours' work a day regularly. The same is doubly true of the person who has had tuberculosis. A complete change should not be recommended except in rare cases, and then only after due consideration. A man can make a living with less effort and in shorter hours in a job he knows than he can in an unfamiliar work, for which he is not trained. It, therefore, often happens that an ex-patient is safer in his old unfavorable work than in a new occupation, otherwise more suitable.

The hours spent in recreation and rest are of quite as much importance as the hours of labor. At least ten hours of every twenty-four should be spent at rest in bed; asleep if possible. Two hours of this time should be spent as a rest period immediately following the midday meal. If the person's work is so arranged as to make this possible, nothing will do more to insure him good health than a daily siesta following the midday meal. He must avoid any diversions which entail considerable exertion. Tennis is to be avoided, and golf is not advisable for a long time; especially if his lesion has been very widespread or very active. Diversions such as the movies, card games, auto riding and the like are safe and pleasant. The patient must be strongly advised against any former indiscretions or dissipations such as excessive smoking or drinking.

The physician's advice will be sought in regard to marriage or, if the individual is married, as to the advisability of having children. In the case of marriage, the advice of physicians is conflicting. In general, the physician who is tuberculous takes a more liberal view. The physician who is not tuber-

culous, the more uncompromising view. If a person has had tuberculosis, has become an arrested case, and remains well for two years, I believe marriage is justifiable, provided the patient's financial condition will make it possible to weather the storm in case of another breakdown. After all, marriage of the tuberculous is largely an economic problem, for tuberculosis is not hereditary. If the second breakdown means financial dependence on relatives or friends, or even worse, if treatment will be impossible, marriage is to be strongly condemned.

When the patient is already married, the question of children depends first of all on his or her physical condition. There is a grave hazard attached to childbirth and the care of the child for the mother who is tuberculous. Even in incipient cases, a period of not less than two years should elapse between the time of her assured arrest and the birth of her child. This, too, is in part an economic problem. In some respects the children of tuberculous parents have advantages over other children. Their parents know something about tuberculosis and the general rules of health. They will safeguard the health of their children more than the average parent. Their children are likely to have greater advantages in the way of health, education and the selection of an occupation. For these reasons, the advantages may more than counterbalance any disadvantages in being the offspring of tuberculous parents.

Now, as to the last and most important consideration in the treatment of the patient after leaving the sanatorium. While under treatment he has become dependent on his attending physician for encouragement and advice. Being deprived of this anchor on his return home, the reaction is inevitable. He is prone to become unduly anxious about himself and to imagine all kinds of things are going to happen to him. This state of mind in itself is sufficient reason for insisting that the patient be under the watchful care and guidance of his family physician for a period of at least a year after he leaves the sanatorium. The duty of the home physician is, first of all, to assure relatives and friends that the patient's germs have been "bottled up" and he is not dangerous to anyone, but to enjoin him to always take the same precautions he was taught to take. This relieves

any embarrassment or anxiety for the patient or his family.

The home physician should make a careful chest examination at regular intervals for at least six months; or better, for a year. If the physician practices care in his examination and shows interest in the patient's welfare, the patient will look forward to these occasions. These examinations give the patient the assurance he so much needs. They make it possible to detect the first signs of a relapse and, incidentally, they give his physician a splendid opportunity to become more proficient in every detail of chest examination.

Usually it is advisable for the patient to return to the sanatorium at the end of six months for a thorough examination where all his previous records are on file and where, by comparison, any very slight change may be more surely detected. This examination should include stereoscopic x-ray films of his chest. If the patient leaves the sanatorium with this understanding, he takes better care of himself in the interval. More than any-

thing else, he wants a good report when he returns for his examination. Further, it is during the first six months following discharge that he is most likely to relapse. If he remains well for a period of six months, his life from that time on may be spent more nearly as is that of other normal, healthy individuals. To paraphrase the words of the Apostle of old: For the patient who has fought a good fight, finished his course and kept the faith, there is laid up a reward of health and happiness.

In conclusion, I believe there is no other chronic ailment to which mankind is heir which responds so readily and successfully to proper treatment as does tuberculosis. Could we teach the public to fully appreciate the value of health; were all physicians able to recognize the earliest signs and symptoms of tuberculosis, had we the proper cooperation between physician and patient, then in a short span of years, the great white plague would be as infrequent as typhoid is today, and the victims of this dread disease would no longer be counted by the hundreds of thousands.

THE SIGNIFICANCE OF ABDOMINAL PAIN*

H. L. BROCKMANN, M.D., High Point

The chief interest in abdominal pain from the point of view in which this subject is here discussed is its diagnostic value. To use this symptom in determining the underlying pathology giving rise to it is working hand in hand with Nature, whose purpose in pain, it seems, is to indicate by this signal that something is wrong and needs to be corrected.

As a general blessing pain is seldom given due credit. The mind of the suffering individual is usually concerned with the relief of his misery rather than with the cause underlying it. We do occasionally come in contact with wise patients who seek the cause and its removal.

Endurance of pain is an individual matter,

and the doctor must judge as best he can whether his patient suffers little and cries loudly or *vice versa*. As a race the Jews are greatly averse to physical pain. Negroes groan much in their simple manner, but on the whole seem to bear pain better than do white people. It is said that women are more patient with pain than men. This individual factor surmounted, there is yet a variance in the extent of pain exhibited in different instances of the same disease, for example in two patients with appendicitis.

The extent or degree of pain often does not parallel the serious nature of its cause. A cancer may be far advanced before it signifies its presence by pain, or for that matter, by other symptoms sufficient to warn the patient.

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The seat of pain may or may not coincide with that of the cause or disease. Tenderness, which is pain brought on or increased by pressure, may be elicited in a different location from that in which a patient may complain of spontaneous pain.

Attacks, periodicity, and qualitative variation such as boring, cutting, throbbing, and dull aching pains, all have to do with the nature of the underlying cause and assist in its diagnosis. The extent of neuropathic tendency in the individual patient must be considered. The intensity of pain depends upon the degree of stimulus of the sensation and of the irritability of the individual. A continuous severe pain leads to loss of weight; therefore if pain is feigned constantly and there is no loss of body weight, doubt is certainly thrown on its existence. During sharp attacks of pain as paroxysms fluctuation of pulse and blood pressure tend to verify its reality, as does also increase in size of the pupils.

Pain is modified by various factors. Excitement and other diverting influences may cause forgetfulness of or less complaint of pain. Organic functions such as digestion and menstruation; mechanical influences such as pressure, position, and motion; physical agencies such as heat, cold and electricity; and diet and remedial measures all tend to modify many pains.

The occurrence of bleeding, vomiting, diarrhea, and other events associated with pain throw light on the nature of its cause. The fact that certain positions of the body are painful is significant of organic rather than functional cause, and the location of the pain is usually the site of pathology. In abdominal disorders there is often an interdependence between pain and motion caused by coughing, stooping, defecation, and even deep respiration. Food usually aggravates pain originating in the gastro-intestinal tract, but occasionally it gives relief, both in neurones and in organic disease.

Following I shall endeavor to give the characteristics of abdominal pain as found in certain more or less frequent disorders, mentioning also the most important diagnostic points other than pain which are associated with it and assist in determining its origin. For this purpose I shall classify pain chiefly as it occurs in the epigastric and two hypo-

chondriac regions, and in the right and left iliac fossae.

PAIN IN THE EPIGASTRIC REGION

Gastric ulcer: Pain from a gastric ulcer may have origin in stretching of the wall of the stomach by gas formation, spasmodic contraction of the wall, spasmodic stenosis of the pylorus, peristalsis, irritating effects of hydrochloric and other acids, changes in the position of the stomach causing traction when the patient assumes certain positions of body, and the association of inflamed peritoneum overlying the ulcer, and adhesions. The pain is therefore necessarily variable, and it may be severe at one moment and absent at another. Strange to say, there may be little or no pain connected with an ulcer of this kind.

The site of gastric ulcer pain is usually on the left side of the epigastrium just below the costal border and there is a spot which is tender to palpation and percussion. The effect of food on this pain is variable, but its effect is permanent and consistent as compared with gastric pain from other causes. Typically the pain comes on within an hour after taking food and is relieved by vomiting, a fact which is seldom true of pain due to gall stones. Constipation aggravates ulcer pain, therefore purgatives and evacuation relieve it. Vomiting usually is present, and may or may not contain blood. It relieves the pain. The pain of ulcer often passes through to the back. It is impossible to distinguish with certainty between the pain of gastric and duodenal ulcers.

It is chiefly to differentiate from ulcer that the following causes of epigastric pain must be considered:

Tabes: Gastric crises may occur before other signs of this disease are present. There is a sudden onset, usually with urgent vomiting. There is no fever. The blood pressure is elevated during the attack whereas in other epigastric pains it is usually lowered.

Gall bladder colic occurs at greater intervals and is less persistent, but the individual attack is of greater duration. There is no relief by vomiting, and a gastric analysis shows low acidity. Pain from gall bladder disease may be present in the epigastrium but is never confined to the left of the midline.

Hernia in the linea alba can be detected by palpation carefully made.

Hepatic congestion causes epigastric pain. If physical examination reveals circulatory decompensation and congestion of the liver is suspected digitalis will assist in clearing the diagnosis.

Angina pains are aggravated by exertion or brought on by it. There is a tendency of the pain to radiate as in true angina. It is probable that associated arterial sclerosis and high blood pressure are to be found, and the attack is likely to be relieved by nitroglycerine or amyl nitrite.

Appendicitis pains frequently begin in the epigastrium, therefore the appendix should always be carefully palpated. If tenderness and rigidity are present in the lower right quadrant, the appendix is more than likely the cause.

Carcinoma of the stomach causes a pain which is more in the nature of a dull ache. It is constant rather than recurrent, is often associated with vomiting and the vomitus contains no free hydrochloric acid and may contain degenerated blood which has the appearance of coffee grounds.

Hyperchlorhydria causes pain in the epigastrium occurring late in the period of digestion. It is relieved temporarily by the taking of food. Absence of other signs of ulcer and especially absence of tenderness help to confirm this diagnosis. Gastric analysis shows an excess of acid.

Gastralgia is a diagnosis which should be made only when all other causes have been excluded. It occurs usually in young women. Pain may occur when the stomach is empty, but is aggravated by the taking of food, even of water. Vomiting usually is absent, the tenderness is general over the whole stomach.

Perigastric adhesions are difficult to diagnose. The pain is influenced by voluntary muscle movements and by change in posture.

Pancreatic stone and carcinoma render accurate diagnosis difficult. They are rare. Fatty diarrhea and glycosuria are at times found.

In *abdominal aneurysm* the pain is more marked in the back. A syphilitic history and the presence of an expansile tumor detected by palpation or x-ray renders the diagnosis almost certain.

Other causes of chronic recurrent pain in

the epigastrium are *spinal caries*, *pleurisy*, *intercostal neuralgia*, *dilated right ventricle*, *soreness of muscles from bronchial cough*, and *thoracic aneurysm*. If these possibilities are kept in mind and a careful examination made, the contents of the epigastrium are not so likely to be thought the origin of pain in these instances.

Sudden severe epigastric pain with progressive symptoms is a characteristic of *rupture of a gastric or duodenal ulcer*, *rupture of a gangrenous appendix*, *rupture of the gall bladder* and *acute pancreatitis*. There are signs of collapse. It is difficult to differentiate between these conditions. The past history is of importance. All these conditions call for immediate laparotomy.

PAIN IN THE LEFT HYPOCHONDRIAC REGION

Gall stones: Pain is sometimes found to be referred from gall stones, but it is never confined there, tenderness and pain occurring in the gall bladder region as well.

Splenic enlargements are sometimes painful. Palpation reveals the cause.

Left kidney stone and perinephritic abscess refer pain to the left hypochondrium, but there is also pain in the back. The x-ray assists in the proper diagnosis, and signs of deep pus are present in abscess cases.

Cancers of the splenic flexure or obstructions lower down, even *accumulated feces*, cause left hypochondriac pain, usually dull and aching if the obstruction is not complete.

Pleurisy, *intercostal neuralgia*, *herpes zoster* and *subdiaphragmatic abscess* are other lesions signified by pain in this region, and should therefore be borne in mind.

PAIN IN THE RIGHT HYPOCHONDRIUM

The *liver* is the source of pain in hepatitis, passive congestion, liver abscess, and carcinoma. Pain from these causes is dull, aching in character.

Chronic gall bladder disease causes indefinite pain and tenderness on pressure in the angle between the outer border of the right rectus muscle and the right costal border. If pressure is continued while the patient takes a deep breath, there will be a catch in the breath. Not all patients with gall bladder disease or cholelithiasis become jaundiced. Gall stone colic is severe and agonizing and radiates typically around the right side to the angle of the scapula.

Duodenal ulcer pain is much like that of

gastric ulcer but is more apt to be a little to the right side of the midline. It is characterized as a "hunger pain" as it comes on two or three hours after a meal, when a patient is beginning to get hungry, and is considered due at least in part to the movement of the stomach from this sensation. There may be blood in the feces or in the vomitus.

Cancer of the head of the pancreas causing pain in the right hypochondrium may be detected by the palpation of a tumor, by jaundice and a distended gall bladder, the result of pressure on the common bile duct.

Right kidney disease is the cause of pain here when the organ is freely movable, by ureteral kinking or dragging on the bile duct; also when there is a kidney stone, pyelitis, or a perinephritic abscess.

In *appendicitis* when the pain is referred to this region, the tenderness to pressure is likely to be at McBurney's point.

Carcinoma of the hepatic flexure of the colon causes rather constant pain, with evidence of intestinal obstruction as a rule.

A *subdiaphragmatic abscess* causing pain here is likely to have been preceded by a gastric ulcer, appendicitis, or a liver abscess. There are signs of deep seated suppuration and diaphragmatic pleurisy. The x-ray assists in the diagnosis. An aspirating needle may reveal the exact location, but should not be used until one is ready to operate at the time.

PAIN IN THE ILIAC FOSSAE

Although there is a great multiplicity of pains in the right and left iliac fossae, the diagnosis of disease in these regions is attended with less difficulty than in the upper part of the abdomen. Anatomical arrangement accounts for a somewhat different array of diseases occurring in the two fossae. However, as the majority are identical on the two sides, it is practical to list those occurring on the right side and later to note the difference to be found on the left. It will be noted that the chief endeavor in diagnosis of right iliac pain is to determine whether or not the patient has appendicitis. In the right iliac fossa we have pain from the following diseases, with diagnostic characteristics as noted with each:

Appendicitis: The pain with this comes rapidly, is severe and is followed often by

vomiting. There is most always tenderness at McBurney's point and localized tenderness or resistance.

Stones in the right ureter often lodge at the lower end, close to the bladder. The pain is variable, but sometimes is referred to the right iliac fossa, and is like that of appendicitis. The patient does not appear as sick as one with appendicitis, and a routine urinalysis may show a few red blood cells. If doubt exists, the x-ray and cystoscope should be used.

Acute ureteritis from trauma of a stone that has passed, or from infection, has caused pain so typical of appendicitis that perfectly innocent appendices have been removed.

Pyelitis is the most frequent cause of right sided pain in pregnant women. Its occurrence is furthermore not infrequent in all other classes of patients and its differential diagnosis from appendicitis is often difficult. Patients frequently refer their pain to the region of the appendix. The urine of acute appendicitis not infrequently contains a few pus cells. Pyelitis is usually differentiated by increased tenderness elicited by careful palpation and pressure in the costo-vertebral angle, by not so great a tendency of the patient to vomit as in appendicitis, by pus in the urine and possibly also by bacteria in stains of centrifuged sediment. A careful cystoscopic examination is occasionally required. By practically the same signs movable right kidney and other pathology in this organ simulating appendicitis can be diagnosed.

Ovarian cysts twisted on the pedicle cause acute pain in the iliac fossa, more often on the right, and lead to frequent errors in diagnosis. They usually, however, call for an urgent laparotomy and thus the proper treatment. These occur most frequently within ten days following childbirth. The associated pallor and shock is significant. It is due in part to the gangrenous condition in which the ovary and cyst are often found, and the anemia is sometimes increased by hemorrhage into the cyst.

Acute salpingitis or *oophoritis* is attended by pain like that of appendicitis yet not usually as severe. The typical tenderness is lower in the iliac fossa and though more on the right, both pain and tenderness are present on both sides. Occasionally unilateral

and confusing, points helpful in distinguishing salpingitis from appendicitis are the history, vaginal discharge, tendency to exacerbation during menstruation (though this too may be true of appendicitis), greater tenderness on vaginal examination and oftentimes palpation of a swollen tube. Surgery is not so urgently demanded.

Distention of the cecum with gas seldom causes severe pain. When it does the pain and all symptoms are relieved by passing flatus or by an enema.

Undescended right testicle becomes painful at times and simulates appendicitis. This should be borne in mind and the scrotum examined to ascertain the presence of both testicles.

Injury in this region may result in pain aping appendicitis. The history and lack of fever particularly rule out appendicitis.

Adhesions about the appendix and cecum give rise to recurrent pains, not severe as a rule. They occur subsequent to operation, and the abscess of fever and increased pulse rate are characteristic.

Tuberculosis of the bowel occurs most frequently about the ileo-cecal valve. It causes dull pain in the right iliac fossa at times becoming severe. Fever is variable. A mass or fulness is frequently present. Its occurrence is nearly always a complication of chronic tuberculosis of the lungs.

Iliac lymphadenitis may occur in either iliac fossa, and the pain, tenderness and swelling may be mistaken for appendicitis. The presence of any skin sore in the vicinity may indicate the diagnosis. Rectal examination may reveal prostatitis or peri-rectal abscess as the original source.

Cancer of the cecum causes not so much pain in the right iliac fossa as it gives evidence by way of a palpable mass. This must be distinguished especially from fecal accumulations and from cancer further along in the colon, as the latter leads to pain in the cecal region by obstruction and distention. The x-ray, digital and instrumental examination

of the rectum and sigmoid assist in the diagnosis.

Ulcerative colitis produces pain more generally spread over the abdomen. Examination of the stools reveal blood and mucus.

Typhoid may run a mild course and yet its pain simulate appendicitis. A numerical and differential white blood count should cause one to proceed with caution and a Widal test will supply further evidence of the presence of typhoid. Perforations in typhoid still more closely resemble appendicitis, but they likewise call for operation.

Herpes zoster produces unilateral pain in either iliac fossa sometimes, and with no objective findings until the eruption appears. When this is absent as it is sometimes, there may be spots of pain in the right loin and on the inner side of the thigh which give a hint as to the true nature of the pain.

Pleurisy and pneumonia at the base of the right lung always should be thought of in iliac pain. The tenderness to deep palpation is not as great as in appendicitis, and there is usually little tendency to vomit. Associated cough and thoracic signs should lead to the proper diagnosis.

Obstruction of the bowel from intussusception, volvulus or other cause leads to more generally distributed pain and gives other signs which seldom allow difficulty in diagnosis.

Other causes of pain in the iliac fossae which are less common and should be borne in mind to prevent error are: sacro-iliac joint disease, tuberculosis of the hip joint, vertebral caries, ectopic gestation, iliac aneurysm, obturator hernia, and tumors of the iliac bone.

Peculiar to the left iliac fossa are diverticulitis and volvulus of the sigmoid flexure; also carcinoma of the sigmoid, and rectum, and retroperitoneal hernia. The symptoms of diverticulitis are so alike those of appendicitis that the disease is nicknamed "left sided appendicitis."



FRACTURES OF THE HUMERUS

With especial reference to treatment of fractures about the elbow

J. S. GAUL, M.D., Charlotte

Practically all fractures of the humerus occur in one of three places; the upper, middle or lower third.

We are accustomed to think of fractures of the upper third as involving the head, anatomical neck, the surgical neck, tuberosities and the epiphysis. Generally speaking fracture of the head and anatomical neck occurs in elderly and middle aged persons. Impaction of the fragments in these fractures eliminates the crepitus and, because of the ecchymosis and pain, it is frequently diagnosed as severe contusion. Separation of the upper humeral epiphysis occurs in children and these between the ages of five and twenty years. Usually the upper end of the lower fragment is displaced forward and inward. Occasionally the lower fragment is entirely displaced off the upper fragment, and, because of the attendant muscle spasm, is drawn up alongside, and overrides it. There may be no displacement at first, this occurring in a few days if the arm is not immobilized. Puckering of the skin in lesions of the upper arm in children should make one suspicious of an epiphyseal separation. This condition, with one fragment overriding, is particularly difficult to correct, because the attached periosteum interferes and does not allow sufficient traction to be applied to give clearance for one fragment to glide by the other into proper position and alignment.

In reducing any fractures in this region it should be borne in mind that the head of the humerus is rotated and that the articular surface looks downward, hence the degree of abduction of the arm used in treatment is directly dependent on the degree of abduction of the upper fragment.

Fracture of the surgical neck is the more common lesion in the upper third of the arm.

Subperiosteal fracture may be seen in children, and in such fractures, of course, there is no displacement or crepitation. The deltoid seems paralyzed or partly paralyzed and there is attendant muscle spasm. The x-ray

confirms the diagnosis.

The greater tuberosity may be fractured from the shaft by trauma or extreme muscular violence. There is always attendant marked disability. In this fracture the best results are always obtained by pegging the tuberosity in place.

Any fracture of the upper third may be complicated by a dislocation of the head of the humerus, in which case, the necessity of first reducing the dislocation is of prime importance. It may be necessary to incise down to, but not through, the capsule of the joint; and with the information obtained through the palpating fingers to manipulate the head into place. In certain cases it may be necessary to employ a hook to effect the reduction of the dislocated head. In either event the reduction of the fracture can be intelligently accomplished by the added information obtained by the palpating fingers in the open wound.

I prefer to treat all fractures of the upper third with the arm in abduction. This can be obtained by the use of a plaster jacket and platform, or an airplane splint with traction.

In these fractures about the upper third, assuming a proper reduction has been accomplished, it is the secondary pathology superimposed that produces the residual disability. The secondary pathology consists of fibrosis and atrophy. Fibrosis results in limitation of motion, and deltoid atrophy produces a prolonged convalescence and disability. Periarticular arthritis and bursitis are troublesome complications.

The employment of radiant light, heat, massage and early passive movements will greatly lessen the period of convalescence and the degree of residual disability.

Fracture of the middle third is usually from trauma. The fracture line may be transverse, oblique, spiral or serrated. Fractures in this region are more prone to delayed union, vicious union or non union. There is

always the danger of immediate involvement of the musculospiral nerve, with attendant wrist drop; or of later involvement by callus or contracting fibrous tissue.

The vicious union with angular deformities commonly seen in this fracture results from a disregard of the force of gravity acting on the forearm, and failure to take measures in splinting to combat it. Non-union results from failure to approximate the fragments, injury to the nutrient artery, interposition of tissue, or, finally, general and constitutional diseases.

In the treatment of this fracture the Jones traction splint is probably the best. Sufficient traction can be applied to approximate the fragments, the forearm is controlled, the patient has full freedom of the shoulder joint, and the two fragments, under all conditions, can be kept properly immobilized.

Should a musculospiral paralysis appear any time during or after the treatment of a fracture in this region, exploration of the musculospiral nerve is imperative, and such surgical procedure as a lysis or suture, as indicated, should be performed.

Fractures about the lower third are probably the most difficult to treat, and the poorest results as to function and appearance are obtained. These fractures require an accurate knowledge of the pathology present; I mean by this we must know whether the fracture line has separated the internal, or the external condyle, or both, from the shaft; and if so whether the fragment has been displaced backward or forward, upward or downward. We must know in the case of children whether the fracture is a combination of an epiphyseal separation with partial crushing of the fragments, and whether the attached periosteum is going to interfere with reduction. We must know whether the head of the radius has been fractured or crushed, and whether the olecranon or coracoid process of the ulna is involved. We should determine if there has been injury to the median or ulna nerve, or the brachial artery.

Fractures about the elbow require more care in the reduction and in the after care than any other fracture. The treatment must be designed to give an accurate reduction of the fracture, which means proper alignment and joint space clearance, as well as the pres-

ervation of the normal level of the condyles to avoid deformities such as the so-called gunstock deformity.

Severe and permanent damage can be inflicted by the rough manipulation of these fractures. Swelling is prone to occur in any event, but it has been my observation that it is greatly increased by the trauma inflicted in attempts at reduction.

There should be no "attempts" to reduce these fractures. I have endeavored to avoid any movement of the fragments except those that actually contribute to the reduction of the fracture.

Practically all recent fractures about the elbow can be reduced without general anesthesia. In the last 43 cases but two have had an anesthetic. In this group, with the exception of four, all have recovered full function of flexion, extension, pronation and supination of the forearm. Of these, two had anesthesia, one having had three, and the other five, previous attempts made at reduction under anesthesia. In these the former patient lacks 15 degrees of full extension, and the latter 12 degrees. Of the remaining two, one lacks 8 degrees of extension, and the other 10 degrees of flexion. None has other deformity.

I have adopted the following procedure: the patient is given an opiate, stereoscopic x-ray pictures are made of the fracture and joint, these carefully studied and the pathology definitely determined. The fragments are then accurately reduced under the fluoroscope, and while I hold the two condyles in position with the thumb and index finger, the patient is required to pass the forearm through full flexion, extension, supination and pronation. Unless he can do this at the time of reduction, he cannot be expected to do it when union of the fragments has taken place, for there will most certainly be obliteration of some of the joint space with resulting bony block. When full motion is assured the forearm is acutely flexed in full supination, and with the styloid process of the ulna and the coracoid process of the scapula in the same sagittal plane. A strip of adhesive is then applied about the forearm and arm, and the arm supported in a sling. With this position maintained, displacement of the condyle with resulting deformity is avoided. There is a point or two to be observed in applying the

adhesive. It should be about two inches wide for small children, and three inches wide for adults. It should be applied as near the wrist as possible, and should lie flat on the posterior surface of the arm and forearm. This is accomplished by having the two loose ends cross at an angle, which is secured by a safety pin. With this method of fixation the arm can be inspected daily, the swelling watched, and the radial pulse can always be detected for any evidence of obliteration. The function of the fingers should be immediately determined to check on median and ulnar nerve lesions. Adjacent skin surface must be protected.

The patient should be seen two or three times the first day, and daily thereafter for two weeks. At the end of five to seven days,

I release the adhesive strip and move the forearm gently in all movements, increasing the range daily and each day place the forearm in a position of less acute flexion. At the end of two weeks the arm is carried in a sling and no restraint applied and the range of motion increased every other day until the maximum is reached.

In my hands this method of treatment has produced most pleasing and satisfactory results. There has been no complication of Volkmann's contracture or nerve involvement in the series of forty-three cases.

In conclusion I desire to emphasize the necessity of gentle manipulation in fractures about the elbow joint and the preservation of joint space and the normal relation of the condyles of the humerus to avoid deformity.

"CLOKE AND COAT ALSO"

Only a few days ago, it came to my notice that in Brooklyn a Health Examination Dispensary has been opened, and it is stated that the Medical Society of the County of Kings unanimously approved of this.

The work will of course be done by scientific physicians without compensation, and thus these physicians by doing a great deal of dispensary work free of charge will again take the bread from the mouths of a great many other physicians.

We hear a great deal of the duty of the physician to the public. That it is our duty to promote the health of the community, etc., yet we hear very little of the duty of the community to the physician.

We hear a great deal of the high calling of the physician but I have failed to find where the community recognizes the physician's high calling by giving him any privileges commensurate to the free work he is supposed to do for the community.

It is not necessary for me to tell those of my readers who are physicians of long standing that the public in general as well as the patients in particular are ungrateful.

I have often remarked that I can see no more reason why if a fireman shows bravery at a fire or a policeman shows bravery in capturing a burglar he should be rewarded and have hero medals pinned on him any more than if a physician exposes himself to a contagious disease.

Still both the fireman and the policeman and everyone else who does any work for any member of the community in the line of his duty is paid what is considered a fair and reasonable wage for his time and services.

Yet it is only the physician who seems to them and has allowed the community to think and has accustomed the community to demand that he serve the community without recompense on health boards, in dispensary work, in hospitals and in any advisory capacity and that he demand money only from those who are able and willing to pay for his services.

We have universal taxation, and the physician is

taxed for everything any other inhabitant is taxed for. No distinction is made in his favor even though he devote all of his time to free work for the community.

I have often objected to the fact that the so-called philanthropists may and do establish hospitals, in the conduct of which everyone is paid for, except the most necessary party to the conduct of any hospital, the physician.

Let the physician understand, let the physician recognize that all the duties that he has towards the community as such are only the same duties which any inhabitant or any citizen has and that as a physician he stands in the same relation to the community as the butcher, the baker and the candlestick maker.

While meat and bread may be necessary things for people to have, still no one would demand from either the butcher or baker that he furnish meat and bread to those of the community who cannot afford to pay, freely without charge. Yet this is demanded particularly from the physician.

The butcher and the baker is regulated and controlled in the conduct of his business by the community which has seen fit to pass laws as to the weight and size of loaves of bread and as to the quality of meat that may be sold.

In the same way the community has seen fit to control the physician in the conduct of his business.

It is faintly rumored that everybody in the Department of Health of the City of New York, for example, is being paid for his services. Why then should physicians be expected to give their services without compensation?

What is needed is, that physicians should unite and refuse to be further imposed upon by those so-called philanthropists who would furnish the poor with free treatment, but refuse to provide a salary or compensation for the physician doing the treating.

—From Editorial in *The Medico-Legal Journal*.

IS THE SURGICAL TREATMENT OF ULCER OF THE STOMACH AND DUODENUM SATISFACTORY?*

A. MURAT WILLIS, M.D., Richmond

The present day discussion of the surgical treatment of ulcer of the stomach and duodenum is voluminous: my excuse in bringing it up for discussion rests solely upon the apparent lack of agreement regarding what may be considered fundamental principles. One is, in a measure, prepared to encounter differences of opinion between the internist, on the one hand, and the surgeon, on the other; it comes somewhat as a surprise, however, to discover that the surgeons are, to a considerable extent, as divided among themselves as they are united against the medical man. It is with the hope that a presentation of certain views that have recently been expressed in the literature, with fairly obvious deductions therefrom, may help to establish harmony and to bring out clearly the definite roles that should be played by the internist and the surgeon, working in close cooperation, to effect a cure.

In a recent article, Sherrin discusses the value of gastro-enterostomy in the treatment of duodenal ulcer. According to him, the end results of this surgical procedure far exceed those obtained by any form of medical treatment, whether looked upon from the point of view of cure or of the risk attaching thereto. He further states that it is undoubtedly correct that the mortality of the medical treatment of chronic ulcers is vastly greater than the surgical. Up to January 1, 1924, he had treated 768 cases of duodenal ulcer surgically, chiefly by gastro-enterostomy, with a mortality of a little less than 2 per cent. He has been able to trace 500 cases operated prior to 1922; and is particularly gratified to learn that of this number 463 are and have remained perfectly well; giving a percentage of cures amounting to 92.6 per cent. Of 903 cases of chronic gastric and duodenal ulcer followed for over two years, 774 have remained absolutely well (85.7 per cent); and

secondary ulceration occurred in only 29 instances (3.2 per cent). He makes the important statement that "patients who go for two years without symptoms never develop them later."

No less optimistic is the view of Balfour regarding gastro-enterostomy, as expressed before the Surgical Section of the A. M. A. in June, 1924. This author says: "In large surgical clinics where gastro-enterostomy is the operation of choice for chronic duodenal ulcer, satisfactory results are reported in from 80 to 90 per cent of cases." He has gathered information concerning the present condition of 1,000 patients upon whom this operation was performed at the Mayo Clinic more than ten years previously. The operative mortality, according to Balfour, is under 2 per cent; 88 per cent of the patients were relieved of their disagreeable symptoms by the operation; and secondary ulceration occurred in only 3.5 per cent of the cases.

Though dealing with a smaller number of cases, the statistics of Haggard and Floyd, are, essentially, in agreement with those of Sherrin and of Balfour. They say that eighty-five per cent of their cases have been, practically speaking, cured by gastro-enterostomy; their mortality rate was 4.1 per cent; they make no mention of secondary ulceration. They are of the opinion that well placed and well executed gastro-enterostomies in average cases of duodenal ulcer are attended with very gratifying results.

Unfortunately, however, all surgeons do not appear to have been as successful in the treatment of ulcer by gastro-enterostomy as have been those just cited. In discussion of Balfour's paper, Strauss stated: "There are, however, clinics that do not report such a high percentage of excellent results from gastro-enterostomies. For instance, recently in Schmieden's clinic in Germany, out of 250 gastro-enterostomies, 50 per cent were found to be failures." Strauss appears to incline strongly to more radical measures; believing

*Read at the meeting of the Tri State Medical Association of the Carolinas and Virginia, Fayetteville, N. C., February 16-17, 1926.

that it is essential in many cases not only to hasten the emptying time of the stomach but also to remove the underlying pathological condition responsible for the ulcer. Clairmont, likewise, reports only about one-half of his cases as cured after gastro-enterostomy; while Sauerbrück, in a series of 70 cases, obtained good results in only 36 per cent. Isaac-Krieger recognizes that gastro-enterostomy is a valuable measure in many instances, but he feels that every time that it is undertaken for the relief of ulcer the future of the patient is shrouded in uncertainty; a cure is frequently the result; but, on the other hand, there is a considerable proportion of cases where not only a failure to obtain relief occurs but the discomforts are definitely increased by the operation.

Lewisohn seriously questions the efficacy of gastro-enterostomy. He states that this operation has been employed for over thirty years, and if it had proved entirely satisfactory over that period, there would not be the gradual increase in the number of surgeons advocating more radical measures; a trend which points strongly to the conclusion that failures following gastro-enterostomy are very frequent. Lewisohn believes that the generally accepted figure of 5 per cent for the incidence of secondary ulceration after gastro-enterostomy is entirely too low; due to imperfect analysis. Many surgeons are unaware of the ultimate fate of a large proportion of their patients; considering "only the few patients who come back to their clinic for re-operation." He states a perfect follow-up system is necessary before positive conclusions can be drawn; communication by letter is most unsatisfactory; the patients should be seen and examined at frequent intervals.

By a follow-up system which certainly seems to approximate his ideal in its efficiency, Lewisohn has ascertained the results following gastro-enterostomy performed by himself and his associates at Mt. Sinai during the years 1915-20. In striking contrast to the experience of Sherren, Balfour, and other optimistic operators, Lewisohn found that gastro-enterostomy, with or without exclusion, effected a perfect cure in less than 50 per cent of their cases. Even more disheartening was his experience as regards secondary ulceration; this was noted in *more than 34 per*

cent of his cases.

By the study of a series of cases which he admits is too small to be more than suggestive, Forsyth has recently discussed the question as to the relative efficiency of surgical and medical methods in the treatment of duodenal ulcer. His patients were among the beneficiaries of an assurance society; they were all medical men; and they were free to select the method of treatment which they preferred. Of the 59 cases, 33 (56 per cent) were treated surgically; 26 (44 per cent) selected medical treatment. The mortality in the series subjected to surgical treatment was a little over 9 per cent; none of the medically treated patients succumbed during the period of observation. The average period of invalidism in the surgical cases was 5 months; in the medical cases 4½ months. The longest period of invalidism was 11¼ months; this occurred in a surgically treated patient; the longest period of invalidism for a medically treated patient was 6¾ months. An examination of all the cases confirms the view that the cases treated surgically are rather longer before being restored to health. After lapses of time ranging from one to ten years, 36.3 per cent of the operative cases suffered relapses; 38 per cent of the medical cases suffered relapses in the same periods. The author believes that his figures "give no support to the claims to greater effectiveness of either surgical or medical treatment; on the contrary, they show that the results of the two methods leave little to choose between them."

To what are we to ascribe this astounding difference in the results following the operation for duodenal ulcer and gastric ulcer? It cannot be explained by the assumption of greater skill on the part of the advocates of the operation. Among those whose reported results are poor are surgeons whose skill is scarcely second to any. The explanation is probably to be sought in the definition of the word, "cure"; to one operator, the fact that his patient survived the operation and is still able to perform the ordinary duties of life justifies his classification as "cured"; to another statistician, the persistence of the slightest digestive disturbance following the operation is sufficient for him to regard this procedure as having failed. It is a point of some interest that, practically without exception, the surgeons who are dissatisfied with

gastro-enterostomy have a more radical measure that they wish to substitute for this conservative operation. As Lewisohn says, there is a growing tendency among a group of surgeons in this country, following the lead of European operators, to favor more and more such operations as sub-total gastrectomy. With a mortality in their hands only slightly higher than that following gastro-enterostomy, the results of gastrectomy for the relief of ulcer reported by some of the enthusiastic advocates of the operation are striking in their excellence. But what is to be the ultimate outcome in cases subjected to the removal of a considerable portion of an important organ; with, probably, a complete suppression of hydrochloric acid secretion? Physiologists attribute a role of some importance to this acid in the processes of digestion; it is believed by many to have a most essential influence in regulating the hydrogen ion concentration of the alimentary tract and to regulate fundamentally the character of the intestinal flora. Indeed, there are those who have suggested that the absence of hydrochloric acid from the digestive juices will ultimately result in profound disturbances, pernicious anemia being one of the results which have been ascribed to such an absence. Sufficient time has not yet elapsed to enable us to determine the actual force of objections of this nature; with the passage of years, it may be found that immediate relief from the ulcer symptoms has been purchased only at the price of even more serious disturbances.

That excellent results often follow the application of surgical methods in the treatment of gastric and duodenal ulcer is recognized by the internist as well as the surgeon. We are told of the dire consequences of the delay following the use of medical methods; fatal hemorrhage; perforation; or malignant transformation of the ulcer rendering subsequent surgical intervention of no avail. As a matter of fact, convincing evidence that intelligently applied medical treatment ever aggravated the condition of an ulcer patient is wanting; indeed, honesty impels me to admit that most striking improvement or apparent cure has been the consequence of medical therapy in certain cases of ulcer where the prognosis, as judged from the surgical standpoint, was extremely dubious. We should not lose sight of the fact that surgery is but a

branch of medicine; our field is a comparatively restricted one. Every intelligent physician recognizes the necessity of individualization in handling different patients; and with our present imperfect knowledge of the etiology of duodenal ulcer and of its course, as evidenced by recovery under medical treatment or even in the absence of any treatment, should make us hesitate immediately to urge surgical operation as soon as a diagnosis is made. Effective treatment of gastric and duodenal ulcer depends upon close cooperation between surgeon and internist; it is my firmly established belief that every case of duodenal ulcer that has not progressed to perforation or is not complicated by pyloric obstruction should be seen by an internist; and that only after a reasonable trial of medical treatment has resulted in failure should resort be had to operation. As has already been indicated, it is extremely unlikely that harm is done by the use of medical methods in the ulcer patient; on the contrary, even in those cases where complete relief is not obtained by this form of therapy and subsequent surgical treatment is deemed necessary, the rest in bed and alkali administration generally effects some improvement and renders the patient a better surgical risk. With surgery, the case is different; it is difficult, or actually impossible, ever to restore the conditions which have existed prior to operation; and we may see as a consequence of our efforts in this direction not only a failure of the patient to improve but an aggravation of his condition which can be relieved only by subjecting him to a second laparotomy or which, unhappily, is beyond relief.

In chronic ulcer of the stomach surgery is probably safer and preferable to medical treatment; one of several operations may be done, depending upon the location of the ulcer and skill of the operator; such for example as excision of the ulcer, with or without gastro-enterostomy or partial gastrectomy. In duodenal ulcers, surgery is indicated in the chronic type that has resisted proper medical treatment, in cases with pyloric obstruction and in all instances of perforation; using such operations as excision of ulcer, pyloroplasty (of the Finney, Mikulicz or Horsley type), or gastro-enterostomy with or without excision of the ulcer.

Surgeons have loudly proclaimed the failure of the medical treatment of ulcer; nevertheless, they stress the importance of post-operative medical treatment of the patients upon whom they have operated. I know of few surgical clinics in this country where a fair trial of medical therapy is made before subjecting the patient to operation; the common procedure is to reach a diagnosis chiefly by roentgenological examination and have immediate recourse to surgery. Indeed, a positive diagnosis may be made only after opening the abdomen in the course of an exploratory operation; and, although the symptoms may have been vague and the physical findings indefinite, more or less radical measures are considered necessary by many operators. Both surgeon and internist should take a broader view of the problem presented by gastric and duodenal ulcer; it does not belong exclusively to the one or to the other but demands the harmonious cooperation of both these practitioners of the healing art if we are best to serve our patient's needs.

DISCUSSION

Dr. M. O. Burke, Richmond:

It is very gratifying to hear a surgeon say that medical treatment will do as much for patients with ulcer as surgery. Dr. Willis is a very broad-minded man, and he has studied his cases thoroughly.

I have been studying these cases for twenty years. In the beginning I did not believe gastro-enterostomy was justifiable, and now I believe it is less justifiable than in the beginning. In the first place, how can gastro-enterostomy relieve ulcer? It does not take away anything that caused the ulcer, and does not cure the ulcer. I do not recall a single case that has not had trouble afterward. In a gastro-enterostomy you do not remove the ulcer; you do not get at the cause; the operation itself does not decrease the hydrochloric acid, which is the irritant. I think that the cases which are improved by the operation improve from the rest in bed and the diet more than from the operation. In the majority of those cases you will find that after the course of six months or a year the stomach contents pass over into the duodenum, just as before, and very frequently you will find there is a secondary ulcer farther down.

I recall two cases that had a gastro-enterostomy, and in three or four years they had to be operated upon a second time. In one of the cases the duodenum was taken out, and that end of the stomach closed. About two years afterward a jejunal ulcer formed a little lower down. Another case, that had a similar operation, has had trouble since. I do not believe I can recall a single case absolutely cured by gastro-enterostomy, unless it was those cases that had pyloric obstruction. I do not mean that gastro-enterostomy should not be performed, because sometimes it has to be, but it should not be done simply for the cure of the ulcer.

Dr. Warren T. Vaughan, Richmond:

A few months ago Dr. Willis made a preliminary report in which he reached very much the same conclusions. While he was giving his report I thought, "Well, here is a surgeon who has the frankness to say that medical treatment is preferable to surgery, even when surgical treatment could be used as well." I thought to myself, "Would the internist be as broad?" Then what was my astonishment, when during the discussion an internist got up and took absolutely the opposite view, and insisted that in certain types of non-emergency cases only surgical treatment would do any good, and not even a month's rest in bed under medical treatment was desirable!

The medical treatment of ulcer is as detailed a procedure, and requires as painstaking care in technic, as does the surgical treatment. The unsuccessful outcome of medical treatment does not mean, necessarily, that the principle of treatment was wrong, since its application may have been at fault. Of course, there are some cases in which there are extensive adhesions around the duodenum that will keep up the symptoms, particularly when the gall-bladder is infected or adherent to the duodenum, or where there is much scar tissue contraction in the duodenum, and in such cases surgical treatment usually eventually becomes necessary.

Dr. F. M. Hodges, Richmond:

I think there is a halfway ground between Dr. Willis' stand and that of Dr. Burke and Dr. Vaughan. That is this: If an ulcer of the duodenum does not respond to six or eight weeks of medical treatment, and there

is a marked degree of scar tissue formation, it is probably a surgical ulcer. It used to be thought that a large percentage of gastric ulcers became malignant. We know now, from work done at the University of Pennsylvania and elsewhere, that only a small percentage of ulcers in the stomach itself become malignant. Many hospitals where good records are kept have had around 30 per cent of recurrences after surgical treatment, and the best hospitals in the country have had only around 38 per cent recurrence after medical treatment. If it is a small superficial ulcer, either in the stomach or the duodenum, it should be treated medically; but if it has gone on for a long time and there is definite obstruction it should be treated surgically.

Dr. T. Dewey Davis, Richmond:

During the past few years I have had opportunity to see a number of cases of ulcer of the stomach and duodenum which have been treated since by Dr. Willis, and during the same time I have had opportunity to outline medical treatment for patients who have come to Dr. Willis for surgical treatment. That illustrates his broad-mindedness in these cases. They come to him primarily to be operated upon, and he refers them to an internist for medical treatment. In a large number of the cases treated medically we also have had opportunity to follow them for over two years with roentgenological examination every six months. We observe the ulcer gradually fade away, each succeeding six months showing the ulcer to be smaller. The changes in the motility of the stomach are very marked, from the very hypermotile stomach down to the stomach of normal motility. It has been very gratifying not only to see the patient improve, but to see the ulcer actually disappear under our eyes. Of course, some scar tissue will remain, but an experienced x-ray man can usually tell whether the ulcer has disappeared, leaving a scar, or whether the ulcer is still active.

Dr. Willis, closing:

In order to bring home the truths in my paper I would like to recite two little incidents which occurred in the past year.

About five years ago I operated on a man for duodenal ulcer in which I purse-stringed

the ulcer and did a posterior gastro-enterostomy. He did well for two years and then without warning had a severe hemorrhage from his stomach. He was treated for this and recovered to have several others over the period of the next three years. He consulted me about a year ago following one of his hemorrhages and I told him, in all likelihood, the best thing to do would be to come back and let me excise the ulcer. I did not urge this. Eight months later he had another severe hemorrhage from his stomach and after he recovered from this illness he decided to go to one of our big clinics for an examination and opinion. After his examination he was told he had an ulcer of the duodenum and should be operated on again. Immediately upon receipt of this advice he returned to me for operation. Before operating on him, being somewhat curious and gratified that he should have returned to me, I asked him why he did so. He said that during the course of his examination at this clinic he met a number of people similarly affected, and in the course of one evening in the lobby of his hotel he met three patients who had had hemorrhages following a gastro-enterostomy. He asked where they had been operated on and they told him at this particular clinic. He concluded that the problem was not local but universal and as he knew me personally, and it was nearer home, he returned to me. I operated on him and excised the ulcer, but I fear in the course of the next two or three years he will consult me again about another hemorrhage. I cite this to illustrate that the best of them are having their troubles.

The second incident I witnessed during the past year in one of the great teaching hospitals of New York. I was in the hospital and saw posted on the operating bulletin board—pyloroplasty for ulcer of the stomach. As I was particularly interested in this line of work I made a point of being present at the operation. When I came into the operating room the patient was under an anesthetic and being cleaned up. I noticed he was a frail, pigeon-breasted young man. The history as near as I could gather was as follows: Age 23, suffering with indefinite indigestion for the past several years, and had vomited or spit up some blood about six months previously. As the history was so indefinite I

asked if the patient gave a history of food or alkali relief and was told he did not. I then asked if he had had an x-ray examination and the reply was "No, it is too expensive." The operator then made the statement that it was barely possible this patient had a chronic appendicitis, as he had read an article recently in which someone had reported five cases of chronic appendicitis associated with hemorrhage of the stomach. With this evi-

dence of weakness I was satisfied this patient would have nothing more done than the removal of his appendix. A long right rectus incision was made. The gall-bladder, stomach, duodenum, etc., were found negative. A little innocent appendix was found and removed. This case illustrates that many of them are not treated before operation and many of them are also not diagnosed before operation.

THE CONTROL OF HEMORRHAGE IN TONSILLECTOMY*

W. P. SPEAS, M.D., Hickory

All surgeons who remove tonsils, regardless of the methods employed, are confronted from time to time with hemorrhage which is controlled only by active measures. The surgeon who is able to say that he has never had a troublesome hemorrhage in a long series of tonsillectomies is to be congratulated, but should be warned that his time will come sooner or later, if he continues in the work. This being true, it behooves the tonsil surgeon to be prepared, for he knows neither the minute nor the hour when all his wits and equipment may be called into action to control this most alarming development.

Treatment for tonsil hemorrhage may be divided for discussion into: I, preventive, and II, active. Preventive treatment may be further divided into (a) general, and (b) local.

I (a) When a patient comes in for operation a careful physical examination should be made. The writer has observed that patients with a high blood pressure bleed more freely than those with normal pressure. One should exercise caution in going into these cases.

The adult female should not be operated upon either during or immediately preceding the monthly period. Mrs. S., age 25, came in for operation. Coagulation time was not ascertained. On being questioned relative to

her menses, she stated that it was two weeks till her time. After operation she bled for 3 days, during which time none of us got much sleep. On the third day she became unwell and all hemorrhage from the throat ceased. She then stated that her sickness usually came on about two weeks before her time.

It is always well to ascertain the patient's coagulation time. The writer is aware that some of our best throat surgeons do not do this. Still if we would always take the precaution to make this test, we would occasionally save ourselves and our patients much trouble.

Various drugs and serums have been recommended, but the writer has had no experience to justify him in making a positive statement in regard to any of them. Calcium chloride has seemed on some occasions to reduce the clotting time, though this conclusion may have been due to faulty reasoning.

I (b) Local preventive measures consist in the use of adrenalin chloride in local cases, and in careful dissection. As a local anesthetic, 2 per cent novocain, to which a few drops of adrenalin chloride solution have been added, is used.

The technique of the operation has a great deal to do with the amount of hemorrhage. Various instruments have been devised for removing the tonsils with a minimum amount

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

of hemorrhage. The writer prefers the dissection and snare method for the simple reason that it is applicable to all cases. A sharp instrument is used to make the initial incision of the mucous membrane around the margin, and a semi-sharp instrument is used to complete the dissection. Care is exercised to keep close to the capsule. In fact, in many cases where the tonsil is not adherent, the capsule is easily split, so that after the tonsil is removed a layer of the capsule lines the tonsil fossa. If, after removal of the tonsil, the muscles are left traumatized and uncovered by a fibrous layer, the dissection has been too deep. When dissection has been completed down to the base, a snare of No. 9 wire is used to complete the operation. If as much time is used in coming down on the snare as is required for operating with the so-called "bloodless" instruments, the amount of bleeding will be just about as small.

No patient should be put to bed till all bleeding has been controlled. It was the custom of the writer in former days to remove the tonsils and put the patient to bed with a prayer that all bleeding would cease spontaneously. Very naturally when this is done, the percentage of secondary hemorrhage is high; for most secondary hemorrhage is really primary hemorrhage which has never been controlled.

II—Pressure with gauze is not worth much in controlling hemorrhage. It is just as likely to dislodge any clots that may be forming in the small severed blood vessels as it is to encourage their formation. In a series of five hundred cases the sponge with pressure was used in only one case, and in that case it was necessary to tie off the bleeding vessel before the hemorrhage was controlled.

All hemorrhage following tonsillectomy may be divided into two classes: That which oozes from the surface of the tonsil fossa, without any discernible bleeding point that may be tied off; and that which comes from vessels of sufficient size to be tied off. That of the first class is rare, especially in patients with a normal coagulation time; but it does sometimes occur and require active interference.

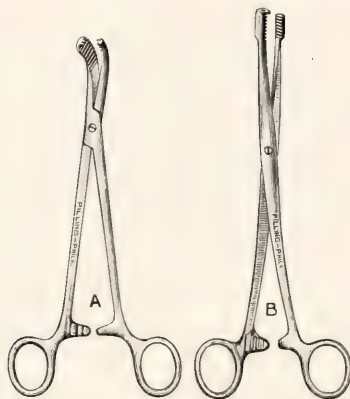
Where this weeping is not too great it may be controlled by carefully touching the surface with crude carbolic acid; if it is due to deficient clotting properties of the blood,

horse serum, coagulum-ciba or parent serum may be used. It is sometimes necessary to suture the pillars over gauze. It should be remembered that this procedure increases the liability to infection, and is permissible only in rare cases.

Most bleeding following tonsillectomy requiring active treatment comes from a macroscopic vessel. The only right way to stop hemorrhage of this kind is to tie off the vessel. A surgeon undertaking to do any amputation or an abdominal operation of any kind without hemostats would be considered very foolish; and the surgeon removing tonsils without the equipment to tie off a bleeding vessel at any point in the tonsil fossa is leaning heavily on the goodness of Providence. All surgeons now recognize this fact as they did not do in the earlier days of tonsil surgery.

So the question resolves itself into a matter of technique. Some of our best surgeons use an ordinary hemostat and needle carrying silk or linen. This has at least two disadvantages. One may puncture a blood vessel in the deeper tissues; and the linen or silk suture, being more permanent, is more likely to produce an abscess. It also requires that the surgeon tie in the throat with the fingers; a procedure which most of us find difficult. A suture has the advantage, however, of staying wherever it is placed.

Other experienced throat surgeons are able to tie easily with catgut around an ordinary tonsil hemostat, which method can not be improved upon for the one who is able to do it. Many of us, however, find this a difficult procedure. The writer of this paper belongs to this latter class. Too often instead of securing with the suture the tissues in the grasp of the hemostat, the distal end of the instrument is caught in the tie, and when the hemostat is removed, the suture comes out tied around its end. To overcome this difficulty the writer has devised a set which he has found to be satisfactory. This set consists of two instruments, "A" and "B" of cut. "A" is like any other tonsil hemostat except that one blade of the instrument is broad and blunt like a Jackson forceps. "B" is used to carry the suture down over the hemostat. It is constructed with an eye at the distal end which aids somewhat in carrying the suture to the proper place. No. 2 catgut is used.



A. Speas' Tonsil Hemostat

B. Speas' Suture Carrier

To place a suture at any point in the tonsil fossa, it is necessary only to have the patient under reasonable control. Where there is secondary hemorrhage in children it is necessary that they be given ether again. Adult patients do not require this. It goes without saying, that a patient should never be allowed to go out till all danger of bleeding has passed. About three hours after operation the throat should be inspected. If there are clots in the fossae they should be removed. Under a clot there is usually a bleeding vessel which should be controlled by ligature.

A small amount of hemorrhage is not detrimental to the patient. In fact, it is sometimes beneficial, especially where a local anesthetic is used; but beyond this the welfare of the patient demands that all bleeding be promptly controlled. The loss of much blood means a slow convalescence.

"Pro Re Nata" writes: I was interested to see an account in the public press of a small boy who put his head through one of the trefoil openings in the side of Westminster Bridge and could not get it back again. In 1900, while passing over the same bridge, I saw a boy in exactly the same predicament. He was surrounded by a big crowd and two policemen were busy smearing his head with soft soap in an endeavor to get him out. I offered my services and was told by one of the policemen to mind my own business and "get away out of it." This I did, having one or two matters to attend to in the Strand and on my return two hours later was surprised to see the poor little fellow in exactly the same position but very much the worse for wear and whimpering feebly. I accordingly went to one of the policemen and suggested that as they had been unsuccessful and as the boy was showing signs of considerable exhaustion I might now be permitted to make an attempt to extricate him. At the time they were using a file in an endeavor to enlarge the opening. "All right," said the constable; "if you think you

can do better than we can, have a go." Speaking obstetrically, the boy had obviously inserted his head in a position of extreme flexion, and after getting it through the opening, had extended it. This could be seen plainly on looking over the side of the bridge, and it was, in fact, the only position in which he could maintain himself fairly comfortably. It was the problem of the after-coming head. I accordingly flexed his head strongly upon his chest. To get his chin well down to his chest I had to push him a little further through the hole, as his tendency was to pull back and so keep up extension. It took just over half a minute to extract him, amid loud cheers from the crowd. It is a fairly obvious thing that if a head can be made to go through one of the openings it can be made to retrace the path by which it entered and it seems a pity that the bridge should have been damaged to the extent of using a hacksaw, especially as doctors are reported to have been on the spot to assist the police force and the fire brigade.

British Medical Journal,
July 17, 1926.



PRESIDENT'S PAGE

Tri-State Medical Association of the Carolinas and Virginia

A. J. CROWELL, M.D.

The absence of your President from the United States is sufficient explanation for the failure of his August message to appear on this page.

For two months he attended prearranged clinics in eighteen of the larger medical centres of Europe and, at the same time, gave considerable thought to medical organization. As a result, his conviction of the need of a clinical organization, embracing the territory now occupied by the Tri-State Medical Association has been strengthened and he believes that it should be fostered by this society.

Its membership probably should be limited and equitably distributed among physicians, surgeons and the surgical specialties and have facilities for and obligated to give or assist in giving clinics when arranged within the borders of their county society. Failure to attend clinics when arranged should require valid excuse and forfeiture of membership, be the penalty for failure to attend two meetings in succession.

The clinics should rotate from State to State (covering the Tri-State territory) just as the scientific body has since its organization. The time and place for these meetings could be designated by a council or committee.

The advantages of such an organization are obvious. In the first place it would offer clinical advantages at a minimum expenditure of both time and money. Many could and would attend such clinics if arranged within easy reach, who otherwise could not spend the time or money to go to a distant

city for such instruction. In the second place, it would tend to develop our own men.

I have attended clinics in the leading medical centres of Europe, North and South America and witnessed the masters in action, and am persuaded that we have just as capable men, as a whole, within our borders as can be found anywhere. Why not give them due recognition and witness their work in their own workshops?

Furthermore, our problems, both legislative and medical, are very similar, and a closer commingling and more hearty co-operation is greatly to be desired. Again such an organization would stimulate a greater interest in the Tri-State Medical Association. Of the doctors of the cities where the clinics are held only members of this organization should have admission to the clinics. This would be an additional inducement for the members of the profession to become members of the scientific branch, in order to attain membership in the clinical organization.

Occasionally, say every four years, the organization could arrange a week or ten days trip to some of the larger cities in other States.

The details of such an organization will have to be worked out should the society decide to perfect such an organization.

A word of approval or suggestion from any member of the society will be appreciated. Criticisms from those who disapprove such a movement will be equally appreciated. It is by free discussion of the problem that we may best arrive at a just conclusion and act wisely.

These patients may roughly be classified as well nourished, even fat, and of good color, and those who are of normal weight or underweight and whose color is fair or poor. The first are the more difficult to handle and to solve. These children are either phlegmatic or high strung. Some are docile and easy to examine, others are stubborn, self-willed and will not submit to any satisfactory examination. The first essential is a careful history beginning before

the birth of the child and continuing up to the present time. The second consideration is a careful and painstaking physical examination which is usually valuable though discouraging, by reason of the negative findings or by reason of findings which may be regarded as consequences of the poor appetite rather than the causes of it.—Anorexia in Children, by Harry Lowenburg, M.D., in *Archives of Pediatrics*, August, 1926.

PRESIDENTS' PAGE

Medical Society of the State of North Carolina

JNO. Q. MYERS, M.D.

If the great medical profession of North Carolina would get more keenly interested in the activities, purposes and undertakings of the State Board of Health and learn to appreciate fully the great assistance the State Board of Health can give, and does give, to the individual physician in providing care and protection for the unfortunate and helpless ones and the great help they give to all in providing preventative remedies and educational propaganda spread over our State, there would be a mutual benefit accomplished that would reach every individual in the State. I do not think it is the desire of the State Board of Health to do tonsillectomies, make periodic medical examinations, or even vaccinate against infectious and contagious diseases, but rather would be delighted to have all this work done by the medical profession, the profession receiving adequate fees from individual patients for this service.

Periodic health examinations, stressing the idea that everybody should have a careful physical examination on every birthday, will give an immense amount of remunerative work to the profession, if the profession would undertake it. It would lengthen life, prevent disease and would make men, women and children receive treatment for disease. It would take more from the quacks and cults than any other idea which the profession could originate or put into operation.

I feel sure if this matter is brought to the attention of the Board of Health, and propaganda spread over the State by the medical profession, or State Board of Health, it will do more good than any one thing that has been done for the health and happiness of the people since the eradication of yellow fever, malaria and smallpox. It will bring the people and the profession closer together.

I am indebted to Dr. H. L. Brockmann, of High Point, N. C., for the privilege of reviewing his excellent paper on this subject, which he presented at the recent meeting at Wrightsville, N. C. He said in part:

In 1920 Dr. W. S. Rankin had in mind as

an activity of the State Board of Health the institution of diagnostic clinics for the purpose of educating people to the idea of periodic health examinations. At this time he sought to have these done by local physicians, popularizing the examinations by propaganda from the State Board of Health, and to have those examined referred for the correction of defects to their own family physician.

It has been well established that this is the work of the general practitioner—the family physician. There has been much cry of late years concerning the passing of the family physician. *We recognize now that it is but the beginning of a new era for this group of practitioners.* As the domain of specialists becomes more crowded there is somewhat of a rebound to general practice. There may also be more profit in this than heretofore. *The bugbear of state medicine seems to have died a natural death.* Public health work will ever be vital, but its extent will be limited. One of its chief functions, as I see it, is service as a medium between the public and physicians. As such, it serves as a huge and free advertisement, encouraging people to look after their health and teaching them that physicians are in fact the real guardians of public health and individual health. The eventual and bulk of public health work rightly falls in the hands of the general practitioners.

The whole idea behind the movement is to educate people in apparent health to go to their family physicians at periodic intervals for a thorough physical examination and careful survey of their habits and conduct of living. By this means incipient diseases are discovered, as well as faulty habits of living which are likely to lead to sickness. The health client is advised fully of his condition and given specific directions as to how he may best remedy any defects or prevent their progress. In any event, he is given all the assistance that a physician can give to keep himself fit to live his life as happily and completely as is possible.

SOUTHERN MEDICINE AND SURGERY

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ENGRAVER'S CUTS TO ILLUSTRATE AN ARTICLE MUST BE PAID FOR BY THE ESSAYIST.

Published to make the average doctor better than the average; to improve his information, his usefulness, his standing and his income.

OUR DISGRACEFUL MATERNAL DEATH-RATE

Medical men, with the help of those working in sciences having important relationships to medicine, have greatly increased the likelihood of a child being born alive and surviving the suckling and teething periods; and we have made it extremely improbable that he will succumb to diphtheria, scarlet fever, typhoid, malaria, hydrophobia, tetanus or smallpox; but we have done pitifully little in the last half century to lessen the risk to life incident to bringing the child into the world.

Our enthusiastic boosters tell us how much more competent than any others we are to deal with all great problems; they even intimate that Providence is partial to us, and, recognizing our unusual importance in the scheme of things, has showered on us blessings suited to our unique merit, while withholding these from "lesser breeds without the law." We doctors are not free from this tendency. There is in fact much ground for gratulation and thanksgiving in that we have added near two decades to the average of human life in the past fifty years. But, when we turn to the mortality records of cancer and child-bearing,—then we are humbled to the dust.

It is a fearful thing to have to admit that, notwithstanding at least 30 years of intensive study of the cancer problem in every medical teaching center of consequence the world over, the death rate from this cause is not diminishing; but the nature of cancer is baffling and no people has demonstrated ability to cope with it. With the diseases responsible for deaths at child-bearing, the case is quite different: the chief is infection, which is understood and which can be prevented; the second is eclampsia, which, though not so fully understood, is almost always preventable.

It is a matter of some astonishment to note how much more is written on cancer than on child-bed diseases. Is it possible that man's greater concern about the former is due to his immunity from the latter?

Abstract reasoning would lead one to conclude that puerperal sepsis and eclampsia would interest men and States far more than would cancer. These diseases interfere with the gratification of man's vanity, as expressed in his desire for a kind of vicarious immortality carried on in the persons of his children: these diseases bring the lives of young women, who have demonstrated their powers of pro-creation, to untimely ends, and thus sap the strength of the State. Cancer attacks mainly those who have passed the possibility of producing new citizens, or doing useful work, and are merely lingering on the stage. Of course these should be ministered to most carefully and tenderly; we are only attempting to show relative importance from several angles.

A report from an important bureau of the national government, published in abstract in this issue, shows conclusively that something is radically wrong with the care given by doctors to expectant mothers, during pregnancy and during labor. At the 1925 meeting of the Medical Society of the State of North Carolina, Dr. Geo. H. Ross, of Durham, sounded a vigorous note against the complacency with which doctors regard the appalling maternal death rate. He pointed out that "the centers having the highest percentage of midwives have the smallest percentage of maternal deaths;" and quoted Dr. Edward P. Davis, of Philadelphia, as saying "the family physician is responsible." If there was any response to this appeal that

we exert ourselves to save the lives which are being unnecessarily sacrificed on the highest of altars,—that of motherhood,—its echoes did not reach our ears.

Oliver Wendell Holmes,—poet, essayist, anatomist, and doctor,—taught the doctors of America that puerperal sepsis could be prevented. That was three-quarters of a century ago. No doubt he felt a great glow of exultation at the thought that this pestilence had been destroyed. One can but be glad that he can not know that today, if she desires a baby, a woman of his own country must face more than twice the danger of losing her life, as must a woman of Sweden, Denmark or Holland; and the same applies to such (according to our 100 per cent Nordics) inferior countries, as Japan, Italy and Finland. An Australian committee says: "Puerperal septicemia is probably the greatest reproach which any civilized nation can by its own negligence offer to itself": that is just as true on this side of the world as on the other.

The most promising remedy suggested is the making of sepsis reportable; indeed it has been well known since 1855 that it was dangerous and contagious. It would be well to go a step further and require doctors who have many cases of this disease in their practice to appear and show cause why they should not be forbidden to attend patients in confinement. No one has any sacred right to retain a license which enables him to repeatedly place the lives of expectant mothers in unnecessary jeopardy.

It may serve some purpose to quote from Holmes. Of these diseases he said:

"They have closed the eyes of infancy just opening upon a world of love and beauty; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it, with less cruelty, the fate of its dying parent; they have bowed the strength of manhood into the dust. The woman about to become a mother or with her new-born infant upon her bosom should be the object of trembling care and sympathy wherever she bears her tender burden, or stretches her aching limbs. The solemn prayer of the liturgy singles out her trials from the multiplied woes of life to plead for her in her hour of peril. God forbid that any member of the profession to whom she entrusts her life, doubly precious

at this eventful period, should hazard it negligently, selfishly, or unadvisedly."

THE FAKER AND HIS KINSMAN, THE TWILIGHT ZONE DOCTOR

It is noteworthy that the editors of two of the best State medical journals in the country, in responding to this journal's expose of a notorious faker, called attention to dishonest practices of those inside the profession and their dread of what would come from turning the light on unethical methods.

Dr. Harry M. Hall, of the *West Virginia Medical Journal*, in a letter published in the August issue, said that he held the "so-called high class doctor" who helped out the faker responsible for the faker. In this issue may be found a communication from Dr. W. E. Musgrave, of *California and Western Medicine*, in which it is stated that doctors "will applaud until you get to striking too close to some of the twilight zone gentry who wear our cloak, and then trouble starts."

Thinking on these expressions of opinion has brought about some change in our inventory of conditions and in our plan of campaign against fakers outside and inside the profession. Of course we had noted that many of these, who, to quote Dr. Hall's words, "acquire wealth; oftentimes have the best practices; appear at any function of sufficient advertising importance," always counsel pussy-footing methods in dealing with any kind of crook. Heretofore, we had attributed this, in the main, to the sloth of fatness, or even to kindness and mistaken charity; now we are rather disposed to feel that their impelling motive is the same as that of the dweller in the house of glass who urges that no stone-throwing be started.

The principles of ethics of all medical societies have always frowned on newspaper publicity. At one time the code of the American Medical Association specifically stated that no member should publish, "or suffer to be published," any report of cases in the lay press. The spirit of this expression is still in force so far as the *lex scripta* goes; it is perhaps a pity that the words were changed. Placing the responsibility for "suffering" newspapers to advertise a doctor definitely on the doctor is the only way to keep the slippery brother from wrig-

gling out of responsibility.

Some say that they are given lenthly newspaper write-ups without their connivance, or even against their expressed wishes. This must occur rarely indeed, excepting of course the instances in which the request that no publicity be given has been accompanied by a sly wink or a poke in the ribs, by way of saying "we understand each other."

Why can this be said with such confidence? Because wherever you see a doctor who is notorious for the publicity given him by newspapers, you will find others in the same line of work, doing it just as well and doing just as much of it, whose names never appear in the lay press until they go to Europe, break a leg, get indicted or die. There you have a complete answer. When upward of ninety-five per cent can manage to keep out of the newspapers, it can hardly be reasonably denied that the less than five per cent can also avoid newspaper publicity *if they desire to avoid it*.

It is here laid down as a postulate that a doctor appears in the lay prints in direct ratio as he seeks such advertising, and inversely as he discourages it.

SOME SPECIALISTS

A specialist, in definition and in fact, may be one of two things: one unusually qualified for a certain task, or one merely limiting his efforts to a special field.

One of the best minds in medicine in the State said several years ago that, so far as he could see, pediatricians were general practitioners who limited their practice more or less to diseases of children.

About a decade since, while on a visit to the modern Mecca of medical men, the writer was fortunate to obtain a candid expression on specializing from an intelligent man. Naturally you will say that an intelligent man is never candid. The rarity is admitted; but there is such a thing. The evening's entertainment for the pilgrims within the walls appealing to neither of us, we were thrown together for mutual entertainment and soon started on a stroll. Finding him to be a thoughtful person, not disposed to inquire into my income or golf score, I decided to ask him how it came about that he specialized in surgery. His answer was prompt and

definite. Said he: "I am lazy and I love the things money will buy; I am a surgeon because, of all the specialties of medicine, surgery requires the least study and yields the largest income." The man fascinated me. I had never seen such a man, and since then his like has not crossed my path.

It may as well be said now that the general run of doctors is allowing the specialist (or "spe-cialist" as my good friend Cyrus Thompson would have it) to get by with entirely too much. In many instances his stock in trade is mostly a large and ill-founded confidence in himself; and too much of buncombe, evasion and blaming of the general practitioner enter into his methods. It is a commonplace to see a specialist attribute to his own skill a favorable result, and blame a death on the referring doctor; when, to the naked eye of an unbiased person, the two cases were on all fours.

For such an attitude the specialist is scarcely to be blamed. The Kaiser was but a product of his environment; and so it is with the specialist. Wilhelm Hohenzollern was born to the throne of a great empire; from his earliest recollection he heard only words of adulation;—naturally he thought he was more than man. The specialist sets himself up as having unusual knowledge; patients who pay large fees flock to him and are sent to him by other doctors; he becomes rich;—and who is so ignorant as not to know that the measure of the wisdom, worth and rank of a citizen of these United States is the length of his purse?

By no means all specialists show a disposition to magnify their abilities or to belittle the general doctor. The great majority is made up of men of a quite different type. These we extoll and proclaim; and we urge upon the other kind the advisability of emulating the higher type in their attitude toward patient, doctor and world at large.

PARTIAL TESTIMONY FROM INTERESTED WITNESSES

It is difficult to arrive at the truth as to a matter of any complexity when all the witnesses to whom we listen are eager to testify to all the facts in the case. Witnesses can not keep an eye single to the truth when they have pecuniary interest in the decision,

Most of the problems of medicine are exceedingly complex. Many have been solved by patient investigation, and honest and wise deliberation on the evidence developed.

It may well be doubted if there is such a thing as entirely unbiased testimony; knowledge of this fact should constrain us to take care to consider only that which, on its face, would appear to have a minimum of bias.

General considerations such as these, along with specific information of certain individual cases, account for this suggestion that doctors had best get their information on their problems of diagnosis, treatment, and even history, from others than drug or physio-therapeutic houses.

Very likely the first medical brochure recommended a certain ointment for use on arrow wounds and was written on the bark of a tree by the maker of the ointment. Anyhow, we now have a great redundancy of writings, all the way from postcards to thick magazines, put out by makers of drugs, biological products and appliances for treatment,—each touting its own.

The range in character is as great as in thickness: many are obviously fraudulent; some are published by reputable houses and contain honest articles from the pens of eminent men. But, even when this latter condition obtains, we should not hasten to adopt their conclusions; for it is but natural for the publisher to choose articles reporting favorable results ascribed to the use of his products; and it is entirely possible, in any given case, that, for every one favorable report in the general medical literature of the time, there would be ten of an unfavorable nature.

Admitting the elusiveness of truth, the rarity of impartial judgment, how hard it is for a witness to tell things just as they are, and the necessity of hearing all the witnesses in open court,—we must conclude that doctors should depend for added information on journals and books published by those selling nothing but journals and books.

JOHN WESLEY LONG, ZEALOT*

Others have recorded the chief incidents in the life of this man. I would rather set down some of my impressions of the springs of his nature. He had many strong and outstanding qualities. He was pious; he was loyal; he was sympathetic; he was earnest, energetic and accurate; but added to these was that which was most nearly himself, was his zeal.

Zeal accounts for his determination, despite great obstacles to gain a professional education; it explains his willingness to break ties and launch out alone on untried seas; it tells why he organized a hospital of his own which he could conduct in his own manner; why he formed and led a unit for caring for the sick and wounded in France, and why, when he returned, broken in health and advanced in years, he had the courage to plan and erect a new and better institution in which to treat his patients.

Zeal made him collect the records of the Medical Society of the State of North Carolina, take a leading part in the organization and the activities of the American College of Surgeons and Southern Surgical Association, and stump the State for the cause of prohibition in the days when most of his fellow-Tarheels took theirs straight,—boldly, openly and unafraid.

Zeal drove him to the herculean labor of collecting the evidence from first hand sources on which to firmly establish the right of Crawford W. Long (no kinsman save in devotion to healing) to the honor of having given the world the boon of ether anesthesia.

He did not stop with being merely *for* or *against*. He was intensely *for* or vigorously *against*. Throughout his life, from the time when he was working in the mornings to attend school in the evenings, through his many changes of location and duties, to his final appearance before the Medical Society of his State just six weeks before his death, he was conspicuously a zealous man.

I give you—John Wesley Long, Zealot.

*This characterization is in the original sense of being full of zeal, not with the modern idea of fanaticism.

OBITUARY

John Wesley Long, M.D.

John Wesley Long, surgeon, was born at Long's Mill, Randolph County, North Carolina, on January 10, 1859. He was therefore sixty-seven years of age. He was the son of Dr. Wesley Long, a practitioner in that section. He attended the public and private schools in his community. As was the custom in those days he "read medicine" under a preceptor prior to going to Vanderbilt University, from which institution he was graduated in 1883.

He began the practice of medicine at Aurora, North Carolina, where he remained only a short time before going to Randleman, in his home county. Ten years later he moved to Richmond and was connected with the Medical College of Virginia, occupying the chair of Pediatrics and Diseases of Women. After spending four years in Richmond Dr. Long came back to North Carolina and was associated with Dr. D. A. Stanton in High Point for a short while. From High Point he went to Salisbury and assisted Dr. John Whitehead in establishing a hospital known as the Whitehead-Long Sanatorium. Here he remained four years, coming in 1903 to Greensboro, where he spent the remainder of his life.

Dr. Long began his career about the time surgery was being born in this part of the country, and, being a man who possessed the power of keen observation, he realized what was coming and from the beginning his efforts were directed toward the development of surgery. He learned his surgery from experience, being one of the pioneers. He remained a student throughout his long career and his powers of observation never failed him.

Dr. Long had the misfortune to lose his father almost before he could remember and it fell upon him to make his own way from the very beginning. At the age of thirteen he left his home and went to live with some friends in a different community. He worked his way through the different schools he attended, often plowing half a day in order

that he might go to school the other half. He borrowed the money necessary to attend the medical school and it required the savings of the first twenty years of his work to pay this debt.

Shortly after settling in Greensboro he was instrumental in opening up the first hospital established in that town. It was known as the Green Street Hospital. When St. Leo's Hospital was organized in 1906 he used every effort to make it a success, and for eleven years was the leading surgeon in that institution.

In 1917 he opened the Wesley Long Hospital, a private institution with thirty beds. At the time of his death an annex of beautiful design, and perhaps one of the best equipped in the State, was practically completed.

This grand climax represents powerful determination, the ability to face and overcome enormous obstacles and crowns him as a resourceful man and perhaps the greatest surgeon in this section of the South.

Dr. Long was one of the founders of the Southern Surgical and Gynecological Association which was organized in 1887. In 1914 he was its president. Of the original one hundred founders only two are now living. He was also a founder of the American College of Surgeons and he has the distinction of being the man who conceived and put upon a working basis the Candidate School for Fellowship in the American College of Surgeons.

As a writer and speaker he was quite gifted, being able to think while on his feet and at a moment's notice could defend himself against almost any opposition. He produced a great number of articles, one of which came out in his early days of surgery and described what is known at present as Jackson's veil. Dr. Long called it pseudo-peritoneal caul. This article was published in a medical journal in the South, twelve years before Jackson discovered the veil, and, like ether anesthesia, the honor has been claimed by another section of the country.

He devised a method of shirring the round ligaments which has been adopted as the standard operation at the Mayo clinic. He did a great deal of work in perfecting the operation of enterostomy and was perhaps the first to call attention to the benefits de-

rived from the use of the omentum about the enterostomy tube.

He compiled a complete history of the North Carolina Medical Society from its beginning in 1849 up to the time of the Civil War. It was only after a search of the entire State that he was able to get together the Transactions which would otherwise have been lost. These numbers are bound into a volume, this being the only one in existence. It is at present in his library. With the exception of three numbers of the Transactions, which cover the period of the Civil War, the entire list since the organization of the Medical Society can be found in his library.

The outbreak of the World War found him already in harness. He immediately organized an Ambulance Company which served throughout the greater portion of the war at the front.

Entirely by his own efforts he organized Base Hospital 65 which went to France and was stationed at Kerhuon. During its service at that station it cared for some 40,000 sick and wounded soldiers. Since the war he organized Evacuation Hospital 38. At his ability to cope with it. With the diseases death he was consulting surgeon to the army with the rank of colonel.

Like every man wishes to do, Dr. Long fell while on duty. Only an hour before he was struck he was ministering to the needs of suffering humanity and, while he had known for several months that the dark shadow awaited him just round the corner, he never for one moment faltered meeting the enemy bravely. Never in his life had he had so many irons in the fire and, could he have lived a few years longer, the community would have been much richer by his accomplishment of many things which were not only in his mind and heart but in the process of formation.

Four days before his passing he was seized by the strong hand of an acute heart attack which allowed only a few moments of rest and on August the first he died. His death closed a brilliant career in surgery and brought mourning not only to his family, but to the entire medical profession of the State and section.

H. H. Ogburn.

DR. ROYSTER PAYS TRIBUTE TO DR. LONG

"With the death of Dr. John Wesley Long, at Greensboro," said Dr. Hubert A. Royster, president of the Southern Surgical Association, "has passed North Carolina's foremost surgeon. Long was a pioneer. Back in the 80's he was doing surgical operations—and with marked success—in the remote districts of Randolph County. Later he was called to a chair in the faculty of the Medical College of Virginia at Richmond, where he gained a great reputation as an operator and teacher.

"I had heard of Dr. Long during my student days. My first personal knowledge of him came at Goldsboro in 1895 when I heard him read a paper on 'Antiseptic Surgery'—a careful presentation of the possibilities of the modern surgical technique in that period. That paper was an inspiration to me. It led me to believe that success was more largely due to the man than the place, and encouraged me in my thought that North Carolina was a good place to come back to. Two years later at the beginning of my own work, I was helped and befriended by this man.

"Dr. Long was one of the founders of the Southern Surgical Association, sectional in name but not in its membership; a select organization of men engaged in surgical practice and imbued with love for the science of surgery. Since its inception in 1887, Dr. Long has been a constant attendant upon its sessions and in 1914 was its president. There are only two founders now left.

"John Wesley Long was a man of high principles and sincere piety. Quixotic by nature, he had been reared after the straightest sect, and could not condone evil. He was of a generous disposition, however, and always ready to lead the hand of charity to those he thought were truly repentant.

"As a surgeon Dr. Long's ability was of the highest. His judgment was sound; his operative technique exhibited manual skill and conscientious care. We shall miss him from our ranks; for, though past three-score years in age, he was in fact active and aggressive. His very activity doubtless accounted for his passing away in the midst of a busy life. Personally I feel deep grief at the loss of an able colleague and long-time friend."—Raleigh News and Observer, August 2, 1926.

DEPARTMENTS

INTERNAL MEDICINE

PAUL H. RINGER, A.B., M.D., *Editor*
Asheville

ESSENTIAL HYPERTENSION

With the present increase in cardio-vascular disease, and the universal use of the sphygmomanometer, increased blood-pressure, or hypertension, is constantly commanding more attention. Two facts have been brought to light as a result of careful clinical observation:

First—There are several types of hypertension

Second—Increased blood-pressure is not a symptom which must be relieved at all costs, for frequently, when lowered, the patient feels worse than when the pressure was higher.

The term "essential hypertension" is in reality a confession of ignorance, for it is defined as a condition of hypertension for which no organic cause can be found. In order to be classified as a case of essential hypertension no evidences of lues must be present, and repeated urinary examinations, phenol-sulphonphthalein tests and blood chemistry findings must rule out all possibilities of a nephritis.

If the case meets these requirements, and the systolic pressure is found to be constantly over 160 mm. of mercury, the patient may be said to be the victim of essential hypertension.

Various theories have been advanced as to the causal factor in essential hypertension. Some have laid its occurrence at the door of focal infection; others at that of the glands of internal secretion; others at that of an internal secretion furnished by the kidney itself; and still others, at that of so-called capillary fibrosis. None of these theories is susceptible of proof; all are in the realm of pure speculation. The fact remains that this condition is often present, is capable of some amelioration, but not of cure; and, if persisting for a sufficient time, will give rise to

various cardiac, vascular, or cardio-vascular disturbances.

James Edgar Paullin, of Atlanta, read a most valuable paper at the A. M. A. meeting in Dallas last April, reporting results of 77 cases of essential hypertension observed over a period of from five to seventeen years. The writer makes no secret of the fact that Dr. Paullin's splendid contribution has been the main stimulus to the writing of this brief article, and strongly recommends every physician to read and study it carefully when it appears in the journal of the A. M. A.

Essential hypertension is probably an outgrowth of the pace at which we live, and one of the prices we have to pay for leading the strenuous life. The condition usually makes its appearance in the fifth decade, though the writer has now under observation two cases, both males, under the age of thirty, who are persistently running systolic pressures of over 140 mm., with absolutely no evidences of lues or of renal changes. Dissipation and intensive business or social life, seem to predispose, as does also heredity; a family history of many cases of hypertension in those nearest of kin being of bad import.

There is no need in a brief review such as this to attempt to detail the symptoms. They are protean, of course; dizziness, palpitation, headache, dyspnea, and a condition of overweight, are among the most characteristic manifestations. There are also very definite changes in the retinal arteries, which can be well observed through the ophthalmoscope. One might here digress to lament the rare use of this invaluable diagnostic instrument, and to second the wish of Dr. Paullin that before many years are passed the clinician will use the ophthalmoscope as freely and as competently as he now uses the stethoscope.

With the persistence of hypertension the circulatory system eventually wears out and shows evidence of exhaustion. Myocarditis develops as a result of the constant heightened resistance the heart muscle has to overcome; cerebral hemorrhage is frequent; and at times renal insufficiency manifests itself,

though to a surprisingly rare degree. The writer cannot quote statistics, but he is quite certain that of Dr. Paullin's 54 fatal cases, only one died of uremia.

The management of these cases is an interesting problem. Drug therapy has very little place save in crises. Treatment consists more in a way of life than in a multiplicity of prescriptions. Nitroglycerine, other nitrates, benzyl benzoate, and iodide of potash, all have been tried *ad nauseam*; and their effect is by no means gratifying. Major's work on guanidin in reducing hypertension, while interesting and suggestive, is as yet too new to warrant its being put down as a dependable therapeutic agent. Furthermore, it is questionable how much is to be gained by markedly reducing the tension which appears to be a compensatory phenomenon, and one on which the patient is to an extent dependent. It may be wise and profitable to reduce a pressure of 220 mm. to 190 mm., but a reduction to 150 mm. (perhaps normal for the particular individual) might cause a sense of ill-being that would be undesirable.

The rational management of these cases consists in limitation of activities, business, social, or professional; in reduction of weight by limitation of food and drink; in elimination, in so far as is possible, of causes of worry and mental unrest; in moderate exercise such as walking and golf; in plenty of sleep and freedom from stress.

The outlook of these cases is on the whole good, it being a striking fact that the prognosis in women is infinitely better than in men, due probably to the fact that men will not, in the main, conform to the limitations the physician sets upon them.

It is, the writer believes, distinctly unwise to tell the patient his pressure, as he is too apt to dwell upon the individual readings and to feel that his welfare depends essentially upon the pressure being lowered. There are many cases on record that have run a systolic pressure of 210 mm. or over for years and remained very comfortable. The ultimate outlook, of course, is bound to be unfavorable, for the persistent hypertension eventually takes its toll from heart, arteries and kidneys; on the other hand, with careful observation and estimation of cardiac and renal function, with modification of life and habits, with optimism on the part of the physician

and cooperation on that of the patient, many years of comfort are possible, and an increase in expectation of life, over the untreated and unmanaged case, is confidently to be looked for.

RADIOLOGY

JOHN D. MACRAE, M.D., *Editor*
Asheville

THE MISUSE OF X-RAYS

The demand for x-ray examination or x-ray treatment has grown to such proportion and its results are so spectacular that people frequently seek out the radiologist before consulting an internist or taking advice from their family doctor. Often they cannot distinguish between the competent radiologist and the quack.

There is no legal provision limiting the use of x-rays to those who are qualified.

X-rays are as potent for harm as for good. They may be compared with morphine or any other poisonous but useful drug. Also they may be considered in the same light as the surgeon's instruments.

Every State in the Union restricts the use of surgery and drugs to physicians who have prepared themselves by years of study and training and who have been tested by searching examinations and found fit to diagnose and treat disease. Very few States have as yet taken steps to safeguard the use of x-rays.

There are many reputable physicians who have given so little thought to this subject that they are willing to have their x-ray work done in commercial laboratories where trained medical supervision is lacking or who delegate this important work to a technician whose training is limited to little more than making x-ray pictures and to starting and stopping the x-ray machine.

One of the instructive results of the above described state of affairs is that the insurance companies who issue indemnity policies to physicians have found it necessary to charge three or four times as much for such protection to radiologists as they charge other members of the medical profession.

The time has come when every State should incorporate into its Medical Practice Act

clauses which limit the use of x-rays to licensed graduates of medicine, and making them responsible for the work of the technicians whom they employ.

Some of the misuses of x-rays which have come to my attention are charged to quacks and some to reputable physicians.

A patient with an active tuberculous disease of the hip fell into the hands of a chiropractor who made an x-ray film showing both hip joints, the lumbar spine and three or four lower dorsal vertebrae. The patient was told that his trouble was a curved and rotated spine which could be relieved by a course of "adjustments." The chiropractor said, "Yes, that hip is in a bad fix but the adjustments will cure it." Adjustments were started but the patient could not stand the pain so an orthopedist was consulted.

A chiropractor said in my presence, while looking at an x-ray film showing a part of the spine in which the vertebrae had become ankylosed by reason of arthritis deformans: "Ah, the fever in that spine was so hot that the bones melted and ran together." And he appeared to believe it.

It is not necessary to cite these examples in order to prove that there is desperate need for control of x-ray practice.

There are dense shadows in the x-ray films of the healthy lungs which represent the normal structure at the hila and I have known of cases where patients have been sent hundreds of miles to consult a tuberculosis expert because a physician misinterpreted the films.

A workman in a factory received a blow on the head and lost consciousness for a time. His head was x-rayed; a reputable surgeon looked at the film and mistook the lambdoid suture for a fracture of the skull and was so confirmed in this opinion that he allowed himself to be qualified as an expert and made the statement before a jury.

In another case a physician trephined the skull because he mistook a suture for a skull fracture.

Two cases of severe radiodermatitis have come to my attention in which the disaster was the direct result of a physician's attempt to use the rays in treatment without sufficient knowledge or effort to inform himself about x-rays.

These illustrations demonstrate two things:

1. Physicians using x-rays must have respect for and knowledge of the subject because they are as dangerous as they are useful.

2. The State should modify its Medical Practice Act so as to place the use of x-rays in the hands of qualified physicians.

THERAPEUTICS

FREDERICK R. TAYLOR, B.S., M.D., *Editor*
High Point

THE USE AND ABUSE OF INTRAVENOUS THERAPY

Some time ago a physician remarked that he believed that in 10 years 90 per cent of our medicines would be given intravenously. He has a perfect right to his opinion, but we found ourselves in exact disagreement with him. We believe that within the next 10 years a healthy reaction will occur that will eliminate a great deal of the present-day fad for intravenous therapy.

What are the indications for this method of treatment? In our opinion they are three in number, viz.:

1. Where a large amount of a liquid must be introduced quickly into the circulation.

2. Where a preparation, because of certain irritating properties, or certain other factors, cannot be satisfactorily given by any other method.

3. Where an emergency demands the promptest and most effective action of a drug that would act less effectively if given by any other means.

We believe that these three headings include practically all the true indications for intravenous injection. Let us consider them a little more in detail.

1. Where a large amount of liquid must be introduced quickly into the circulation. Examples of this are blood transfusion, the giving of massive doses of serum, the introduction of salt or glucose solution into the circulation in an emergency. All these things demand the intravenous route whenever practicable. If speed is not essential, salt or glucose can often be given by rectum, though by no means always. Personally, we consider hypodermoclysis as unnecessary torture in most cases, and think that inability to

get into a vein is the chief indication for this otherwise antiquated procedure, though there is comparatively little objection to it in unconscious patients whose condition is not so urgent that the method is too slow. In infants, intraperitoneal injection is more and more coming to be recognized as a good substitute for intravenous therapy where non-irritating substances are used.

2. Where a preparation, because of irritating properties, or certain other factors, cannot be satisfactorily given by any other method. Under this heading will come the arsphenamin group, excluding those members of it specially suited to intramuscular work, such as sulpharsphenamin. It is true that some great authorities, such, e. g., as Sir Humphry Rolleston, consider it good practice to use neoarsphenamin intramuscularly,* and even New and Nonofficial Remedies recognizes this use of it, but we prefer to use it intravenously or not at all, substituting sulpharsphenamin if the intramuscular method is employed. There are some drugs which are not especially irritating, yet which, so far as we know, are ineffective unless put into a vein. Among these are the germicidal dyes when employed to combat bacteremia, such as mercurochrome or gentian violet. We believe, however, that the value of these has been greatly overestimated, and already the pendulum is beginning to swing back. Whether it will finally stop short of the zero point, or whether the present popular treatment of septicemia will be completely discarded, we do not profess to know. We are, however, beginning to realize that the cures are few, and the dangers real, in this treatment. Recently reports have appeared stating that in some fatal cases of septicemia treated with mercurochrome intravenously, the kidneys showed changes practically indistinguishable from those found in the kidneys of fatal cases of bichlorid of mercury poisoning.

3. Where an emergency demands the promptest and most effective action of a drug that would act less effectively if given by any other means. Digitalis is perhaps the classic example of this group. Where no emergency exists, it is preferably given by mouth, but where prompt action is required, the intravenous route is in a class by itself. Epinephrin, combined with salt solution in com-

batting shock, belongs both in this group and in the first group. A number of other drugs may be used intravenously as life savers in acute emergencies. At this point, however, it might be well to note that some drugs are no more effective intravenously than they are when given by simpler methods. Nitroglycerin is an example. It is a fact, not well enough known to most medical men, that an exceedingly prompt response may be obtained to nitroglycerin if a tablet be dissolved *under* the tongue, rather than swallowed. It seems to be absorbed directly through the mucosa and acts almost immediately.

So much for the uses of intravenous therapy. Now let us consider for a few moments some situations in which this method of treatment is often employed, where the indications are not so clear, and where, as we think, there is usually a definite contraindication to the treatment.

One of the most frequent, yet in our opinion most questionable supposed indications for intravenous therapy today is the giving of so-called "tonic" drugs, notably iron, arsenic employed organotropically rather than etiotropically, and certain other drugs sometimes combined with one or both of these. In the vast majority of cases we can see no good reason for this. We believe that these drugs are better given by mouth, in a form suitable for that method of administration, or, if there is any special objection to this, subcutaneously, in a fitting preparation.

To be sure, intravenous therapy usually confers more financial benefit on the physician than does oral administration, but while we most heartily wish that every physician were possessed of twice or thrice the worldly goods that are his, and while we realize, not only the desirability, but the necessity, that the practice of medicine should be on an economically sound basis, we must insist that its *primary* purpose is to give the greatest possible benefit to the patient. However, while some physicians may be influenced in favor of intravenous therapy by economic factors, we believe that far more of them are influenced by the propaganda of certain proprietary interests which sell intravenous products. Then, too, there is the type of physician who feels that he is "pulling off a stunt" when he puts something in a vein, and derives no little self-satisfaction therefrom. Last, but



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not least, is the type of patient who demands what is to him the spectacular method of treatment, and it is only too easy to yield to his demands. What harm is there in yielding to such demands? If a patient wants a more costly technical performance than he really needs, and is willing to pay for it, why not gratify his vanity?

There are a number of reasons why this is usually a mistaken course, in our opinion. In the first place, such a patient will be likely to broadcast the news, and create a demand for unnecessary and unjustifiable intravenous therapy in the minds of the public, and regular medicine will find itself guilty of mis-educating the public just as truly as are the various cultists. Such a course will in the long run damage the prestige of regular medicine by piling up one more fad against its good name.

There are certain risks connected with intravenous therapy, which, though admittedly very slight, are hardly to be totally disregarded. It is at least theoretically possible for a thrombus to form at the site of injection, with a resultant embolus breaking off from it and producing dire results. So far, the happy absence of reports of such a complication assures us that this risk, while not absolutely negligible, is very nearly so. It seems to us, however, that there is another risk somewhat less negligible than the risk of embolism to be considered. When promiscuous intravenous therapy is practiced on a patient, and a large number of injections given, while no harm may result in the majority of cases, still, in a certain number of patients, practically all the available veins may become thrombosed. If some serious emergency arises later on, necessitating transfusion, infusion, or other prompt action; or if one of the intravenous arsphenamins be required, what should be a simple easy procedure is converted into a difficult or impossible one, and it is even conceivable, in a case of extreme urgency, that a life might be lost as the result of inability to get into a vein on account of previous unnecessary intravenous treatment. Therefore, in our own practice, we lay down the following dictum: *the absence, in a given case, of all three of the definite indications for intravenous therapy given above, constitutes, practically always, a sufficient contraindication to this*

method of treatment, whereas the presence of any one of them is adequate reason for its employment.

Note—It is well, too, to reflect on this: Even the wisest doctor can not always be certain that he has chosen the right drug or that the preparation is just what it purports to be; medicines placed in the stomach can be rejected; those injected directly into the veins must be handled as best she can however ruefully Dame Nature may shake her head about it.—*Editor of the Journal.*

SILVER PROTEIN PREPARATIONS IN N. N. R.

The U. S. Pharmacopeia, X, has formulated new standards for silver protein preparations of both the strong type, such as protargol; and mild type, such as argyrol. All the silver protein preparations admitted to N. N. R. have been tested in the light of these standards, according to a recent report, and have been found to conform thereto.

A REMARKABLE SERIES OF SPECIAL ARTICLES

A remarkable series of special articles by Dr. Bernard Fantus has been running for several months in the Journal of the A. M. A., entitled, "The Technic of Medication." It is of great interest and value. It goes into the details of practical methods of administration of therapeutic agents as does no other work with which we are familiar. Throughout, it is obviously the work of a master. We most heartily recommend it to all medical men. We rather suppose, and very much hope, that it will later be published in book form by the A. M. A. If so, it will add an important volume to the valuable therapeutic literature published by the Association.

*Oxford Loose Leaf Medicine, Vol. III, p. 396.
(New pages on "Diseases of the Liver.")

PEDIATRICS

FRANK HOWARD RICHARDSON, M.D., *Editor*
Brooklyn, N. Y. and Black Mountain, N. C.

FAULTY FOOD HABITS OF CHILDREN

Among the faulty habits, there is one subclass that bulks so large, both in its overwhelming effect upon the welfare of the child, and its influence upon the peace and happiness of the rest of the family, that it deserves extended discussion. Anyone who has dealt with children in their homes will realize at

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once that the group referred to is that of faulty food habits. So common are these, one is tempted to say so almost universal, that a consideration of the subject of malnutrition would be hopelessly inadequate, that I'd not take up this class, and deal with it as one of the most important phases of the problem of the great American childhood disease.

It will be noticed that the term "group" or "subclass" was used. This was done advisedly; for the number of individual food crotchets and food idiosyncrasies is legion. There is the aversion to vegetables; the inability to eat some one particular food; the dislike to a certain consistency, like that of oatmeal with its "mucilage-like feeling," or beans with their "squishy" softness, or crust of bread with its hardness. There is the repulsion to certain tastes; the refusal to take food of a given color; and a disgust, amounting in some cases almost to nausea, at the odor of this food or that. Some children consistently and steadfastly refuse to clear up the portion of food given at a helping; some have certain rituals that must be gone through with, if they are to get through with their meals. Some dawdle in maddening fashion; some hesitate about starting, though they seem to get along well enough when once they have begun; while some make a prompt start, and then seem to lose interest before taking more than a few mouthfuls. Still others hang back in the traces, and have to be nagged at and goaded constantly, or they never would get their food down.

One could go on almost indefinitely, if it were worth while, cataloguing one after another of these varieties of faulty food habits. But the main thing about them all, the summing up that the mother usually gives, is comprised in that commonest of all the complaints made by the mother to the doctor or the nurse: "My child won't eat!" What are we going to do about it? For there is no doubting the truth of the assertion, in the vast majority of these cases.

Anyone who is so unfortunate as to chance to be a guest at the table where such a child is a member of the family group, can testify with bitterness on this subject. He knows that the whole conversation centers around the food likes and dislikes, the food performances past and present, the food habits and

vices, of the child. Each one of the family takes his or her turn in trying to make the child eat. Blandishments, threats, exhortations, promises, cajoleries, are trotted out in turn; all to no purpose. Meanwhile the small tyrant basks in the limelight of the combined attention of the whole tableful, family and guests; and hears what he will do and what he will not do retailed at great length and in great detail, as if they were of the most vital moment. The fact that such a prostitution of the delightful half-hour that a family mealtime can and should be is alike nerve-wracking to the guest, exhausting to the parent, and (worse of all) cruelly harmful to the child, never seems to be realized by the elders who have allowed themselves to drift into this harmful but very common practice. When remonstrated with, they seem most surprised to hear that the condition is a quite unnecessary one, and that it can be terminated at any time, provided that they are willing to exercise the necessary firmness, that can easily be summoned up by parents who realize the importance of the situation. Practically all of the varieties of faulty food habits that have been mentioned or hinted at, can be cured by the routine treatment about to be described.

In order that this treatment be promptly effective,—as it must be, if parents are to stick it out and win the battle in the day or two that one can safely promise is as long as the cure requires,—it will be necessary to institute a definite regimen with regard to the giving of food; and it must be understood that there is to be no deviation from this, on peril of rendering the whole cure abortive. This consists first in the establishment of certain definite mealtimes,—four or five a day, as will be explained below, according to certain conditions to be considered; with the inviolable rule that nothing is to be taken at any other time, upon any pretext whatsoever. Second, all sweets are to be eliminated from the dietary; "added sweets" perhaps is a fairer way of putting it, as it is not desirable or necessary that there should be special cooking of unsweetened food for these children. This prohibition includes not only such palpably undesirable sweets as the ubiquitous granulated sugar and candy; but as well such camouflaged members of the fraternity as

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honey, syrup, jellies, jams, cake, sodas, sun-daes, drug store drinks, etc. For a quick cure, even such an apparently harmless addition as sugar on cereals may best be done away with. The results follow such Spartan measures so much more promptly and dependably, that it seems well worth while going the limit at once. To the commonly advanced objection on the part of the mothers that they thought a certain amount of sugar was necessary to the diet, one has only to instance the fact that practically all starches are broken down into the simpler sugars before digestion,—as witness the necessity of eliminating many foods besides the frank sugars, in maintaining a sugar-free diabetic diet. Another telling point is to compare the enormous average sugar intake of the American dweller, as compared with that of the average European,—as well as to compare the condition of the teeth of said European in his own country, with the decay that so rapidly sets in when he gets to America, with its cheap sugar,—which not even our furious tooth-brush and tooth-paste propaganda is powerful enough to offset! Thirdly, his butter is to be cut down to ordinary proportions and his cream is to be interdicted; for there is a very common but erroneous belief that the way to fatten these youngsters is to feed them fats! In fact, if he is getting a very rich milk, even certified, with its 4 per cent fat is too rich for many children, it should be partially skimmed. It is customary for some doctors always to order that two ounces be removed from the top of the bottle of certified milk, as they have found it so much more satisfactory than the full strength milk. Fourthly, and perhaps most important of all, there is to be absolutely no urging of the child to eat this, that, or the other thing. In fact, the rule that best accomplishes what is desired, is to order that nothing more be said to the child about his food than would be said to the casual guest at the table. If he eats a little, it is quite all right; if he eats nothing, it is still perfectly all right; and he may leave the table with food untouched after twenty minutes. In fact, it is the rule that he must leave at the end of this period; and the effect of this rule upon the “dawdling” child is sometimes quite startling.

It might be too much of a strain upon the resolution of the mother to ask her to refuse

the teasing for “between-meals nibbling” that such a rule would give rise to, were the ordinary long intervals between meals to be observed. It is customry, however, to insert either a mid-morning or a mid-afternoon meal,—sometimes both,—into the daily schedule of meals, in these cases. The rule, is to allow as nearly as possible the ordinary hours for the three main meal times; and to introduce the mid lunches wherever it is possible to put them three hours before a main meal. For instance, if the family eats at 7, 12, and 6, it will probably be well to introduce a mid-morning lunch at 9, and a mid-afternoon snack at 3. If on the contrary the main meals are usually eaten at 9, 12:30, and 7, a mid-afternoon lunch at 4 may be as much additional as it is wise to offer. Again, if mealtimes are 7, 1, and 5:30, a mid-morning lunch at 10 may be the only thing necessary to be added.

Of what should these four or five meals consist? It seems a little presumptuous to offer to readers, many of whom are skilled dietitians, a series of lists of various foods to be offered to these children. It may be suggestive, however, to set down the general rules given the mothers of these youngsters in accordance with which they are to plan their children's meals.

(a) Breakfast—A cooked cereal, without butter, sugar, or cream. As much milk as is desired with it. A glass of milk; small glass to be offered, with the privilege of having it refilled. Half an orange; second half, if desired. Bread (brown, graham, or wholewheat. Raisin bread is often gladly taken, where brown bread without it is not so much relished). Sparing spread of butter. Strip or two of bacon.

(b) Mid-morning lunch—Brown bread; a glass of milk. (If he takes lunch in school, a large apple or ripe banana may be substituted, as being more convenient.)

(c) Dinner—One starchy vegetable, one or more green vegetables, brown bread and butter, glass of milk, simple pudding (not classed as a sweet).

(d) Mid-afternoon lunch—Crackers, preferably graham or arrowroot, a glass of milk.

(e) Supper—Glass of milk; graham crackers, whole or broken up to be eaten with milk; stewed fruit, prunes, apple sauce, or apple baked without sugar.

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As mentioned elsewhere, this will be far more effective if a mid-afternoon nap or rest period is introduced after the dinner meal, and before the mid-afternoon lunch.

It may be urged that there is no meat here, and that egg has been omitted. As to the omission of meat, this is not insisted upon, in cases where for any reason the parents feel anxious that it be included. In any case, chicken once or twice a week makes a very desirable addition to the dinner. As meat is distinctly not a necessary food for the growing child, however, its omission can hardly be criticised. In the same way, egg is allowed if desired, every other day being considered frequent enough. So many children seem to have either an egg idiosyncrasy, or to be affected somewhat when egg is first given, that it is well to give this gradually, offering rather small amounts at first. Fish may also be allowed; boiled fish having white meat is perhaps preferable.

The above outlined rather simple,—some may say extremely simple,—diet is what has been found perfectly satisfactory in the treatment of these children. Modifications are made freely, when any individual or family circumstance makes them seem desirable in the particular case. When the mother once understands the general scheme on which the dietary is planned, she may fill out the menu as the variations of the market and her individual pocketbook allow. This plan has been found considerably more satisfactory to both mother and physician, than the one of specifying in detail each item, and so keeping the mother dependent upon the whim of the doctor.

There are many small points that have been found most helpful in carrying out the common-sense regimen for accomplishing proper and adequate nourishing of these children, outlined in this article. For instance, it has been found that it is well worth while investing each meal with some of the formality that we grown-ups use in our own mealtime social intercourse. A blessing, asked in turn by the participants at the meal, may seem a bit out-of-date; but there are some of us that cling to it as a form that is well worth observing. The custom of letting the children of the family eat at a small table, and conduct their own conversation and actions under the stimulation and the check of each

other's censorship, makes a new interest for children who have been bored to extinction by the converse of their elders. Small dishes and utensils that are used for no other purpose are of course essential. It is distinctly helpful to introduce into the mealtime procedure the gracious custom of our hardy forebears who served themselves and each other, without thought of social inequality in the fellowship of home service. Montessori has made good use of the interest involved in this ministering of the children to each other, the one chosen to serve a meal being considered the one favored, rather than the one discriminated against.

It has been found that to some children, there is an undue stimulation in the presence of others at the table. In such cases, it is wise to allow the child to have his own separate table, in the room with the others or at a time and place apart from the rest of the family, as experience may dictate. These children do far better by themselves; and as we are all committed to the principle of individualization in the practice of medicine, it is but common sense to give each child the treatment that seems to give the best results.

EAR, EYE, NOSE AND THROAT

HENRY L. SLOAN, M.D., *Editor*

Charlotte

GLAUCOMA IN MYOPIA

We have been taught for years that glaucoma must always be looked for in hyperopia, but that it is seldom found in myopia. Recently the writer was surprised to find glaucoma simplex in a man of forty-two years of age with myopia as follows:

Right eye: -6.50 $-.50$ ax 90 20/15

Left eye: -7.00 $-.50$ ax 90 20/15

The process was a very early one; it showed very slight cupping, with moderate increase of tension, which was controlled with difficulty with miotics. The field defects were very slight. This patient had a retinal detachment in the left eye. The right eye has been successfully operated, an iridosclectomy, and a good filtering cicatrix, which has controlled the tension now for six weeks.

In the Transactions of the American

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Ophthalmologic Society for 1925, Dr. Arnold Knapp, of New York, has an excellent article on "Glaucoma in Myopic Eyes." He says that while the anatomical peculiarities of hypermetropic eyes naturally predispose to glaucoma, glaucoma simplex not infrequently occurs also in myopia. He refers to Lange and Gilbert, who found myopia present in about one-third of the cases of glaucoma simplex, while myopia occurred in only about one-tenth of the cases of congestive glaucoma.

Dr. Knapp reports thirty-two cases,—three between the ages of forty and fifty, six between fifty and sixty, eleven between sixty and seventy, and twelve over seventy years of age. The majority of the patients were over sixty. The type of glaucoma was always chronic; at no time were there any acute symptoms. The features of the cases were normal or deep anterior chambers,—only three had shallow anterior chambers,—low increased tension, shallow cups, and the usual glaucomatous field defects. The condition was found in myopia of high and low degrees.

The treatment of the cases was by both miotics and operation. Operation was done in the cases in which miotics failed to control the process, and he concludes the operative results were surprisingly good considering the degenerative nature of the lesion.

This is an extremely important subject, and this fact was emphasized again and again in the many enthusiastic and interesting discussions that the paper provoked. No longer is it permissible to ignore the danger of glaucoma in myopic eyes. On the contrary, the burden is on us, especially to be on guard lest we overlook its presence. And glaucoma is much easier to overlook in myopia than in hyperopia, for it is much more difficult to recognize in the presence of high degrees of myopia.

UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*
Charlotte

CHRONIC VESICAL DISTENTION: ITS MANAGEMENT

Chronic retention of urine, although a symptom of some underlying condition, can

profitably be discussed somewhat at length, because mismanagement of the case with this presenting symptom may, and often does, mean death before relieved by surgical interference or by operation. When consulted by a patient who cannot pass his urine, the doctor should think of three possibilities:

1. Retention of urine
2. Suppression of urine
3. Rupture of the bladder.

Rupture of the bladder is a comparatively rare condition. Usually a history of trauma or previous bladder symptoms can be ascertained. Percussion and palpation are valuable aids in a differential diagnosis, together with the catheter introduced into the bladder. If we inject a measured amount of liquid into the bladder which does not return, this latter measure will usually establish the diagnosis or rule out a possible rupture. A cystogram is possibly indicated in rare cases, but I believe the diagnosis of a ruptured bladder can be made in most instances without its use.

The diagnosis of suppression of urine and rupture of the bladder having been excluded, it is quite clear that we have a bladder filled with urine to deal with. If this is a fact, what are the common causes of retention of urine in the bladder?

A. Stricture of the urethra

- (1) Organic
- (2) Spasmodic

B. Senile Prostatic Hypertrophy

- (1) Benign
- (2) Malignant

C. Enlarged prostate, due to Infection (Prostatic abscess)

D. Trauma of the urethra from the presence of stone or a foreign body

E. Paralysis of the bladder, due either to an acute infectious fever (as enteric fever) or to some neurological condition (as myelitis).

I am not going into the differential diagnosis of these conditions, but I desire to emphasize the fact that chronic retention of urine in the bladder has a definite underlying cause which should be determined, and is usually a surgical and not a medical problem. Drugs by mouth are of very little use in the treatment of such conditions; yet, we see cases almost weekly with symptoms of frequency of urination who are in reality passing off the overflow of urine from their bladders, who are

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being given bladder sedatives by mouth without any hope for relief.

In this article it is not my idea to discuss the methods employed by genito-urinary surgeons for the relief of the chronically distended bladder, but to give a few short rules which, if followed, will generally mean health and happiness to the patient, or, if they are disregarded, may mean an acute prolonged illness, or sudden death. We should not at any time minimize the importance of the symptom of chronic urinary retention. It may be the forerunner of any condition, from a troublesome cystitis to a profound nitrogenous retention, uremia and death.

Let me diverge from my subject long enough to say that acute retention of urine is not generally so serious a symptom, and in the young patient can generally be dealt with much easier and with a certain degree of safety. Presented with a patient with acute retention of urine, observe the following general rules:

Do as little as possible in the way of instrumentation. Employ palliative remedies as, a hot sitz bath, morphine sulphate given hypodermically, to see if these will not enable the patient to void his urine without instruments do not give relief, the use of a soft rubber or silk web catheter, preferably of the Coude type, should be used to withdraw the urine. If the bladder contains not more than a pint of urine, and the distention is of short duration, it may be emptied with safety; but, if you are confronted with an enormous distention, not more than 12 oz. of urine should be removed at any one time. The urine should be allowed to escape slowly through the catheter and some non-irritating solution, preferably 10 per cent boric acid solution or physiological salt solution, should be introduced into the bladder to replace the evacuated urine.

In cases of chronic retention of urine, the picture is quite different, and when the residual urine reaches 500 c.c. or more, this type of retention is always difficult to manage, and the proper decompression of the distended bladder is often extremely difficult. A patient of this type should be placed in a hospital when first seen, put to bed, and carefully attended and watched by the surgeon in charge, and a special nurse, if possible,

who has been trained or has had some experience in the management of such cases.

Under the most favorable conditions of surgical cleanliness, the decompression of the bladder is begun. This procedure can usually be safely carried out by intermittent catheterization, withdrawing small quantities of urine, four to eight ounces at a time, two or three times daily. Secondly, the bladder may be decompressed gradually, allowing the urine to flow out slowly, and the amount of urine may be replaced up to four to six ounces of the original amount with a non-irritating solution, as, 10 per cent boric acid solution, or, a physiological salt solution. A safe working rule, if the bladder is decompressed, is to replace two-thirds of the original amount of urine in the bladder with a like amount of one of the solutions named above.

The residual urine should be reduced gradually each day without causing undue catheter reactions or bleeding from the urethra bladder mucosa or kidneys. Many ingeniously devised pieces of apparatus have been advocated for slowly decompressing a distended bladder, which, if watched carefully by a trained attendant, are of tremendous advantage; but, without trained attendants who will constantly watch the patient, they are possibly not practical. During the stage of decompressing the bladder, the patient's cardio-vascular system and his gastro-intestinal tract, as well as nervous system, should be watched very carefully. Liquids must be forced up to 500 c.c. in twenty-four hours, given preferably by mouth or by hypodermoclysis or intravenously.

Note—I am indebted to Dr. Henry Morton, of Brooklyn, N. Y., for his clear-cut classification of urinary retention.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

HIBBS ON FUSING THE JOINT IN TUBERCULOSIS OF THE HIP

Any measure which tends to abbreviate the usual time and course or lessen the debilitation of hip joint tuberculosis naturally interests the worker who follows patients with this affliction. Hibbs has been a pioneer in

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searching for surgical measures to supplement medical management in shortening the course and lessening the destruction of bone and joint tuberculosis. In the article appearing from his clinics, July issue Bone and Joint Journal, twenty cases are reported where the author has used a very ingenious operation to obtain fusion of the hip joint and incidentally arrest of the disease.

The operation consists of exposing the hip joint, side of ilium, and trochanter to well down on the femur; then, with a chisel, a wedge of bone including most of the trochanter and a portion of the cortex of the femur is patterned out and turned, lower end upward, across the neck and forced into a crevice prepared in the rim of the acetabulum. Before the bone wedge is finally placed the capsule of the joint is opened and the upper surface of the neck of the femur is lifted up so that fresh bone contact will take place from the groove in the ilium, along the neck and well down on to the trochanter site. This is supposed to assure an early bony bridge ankylosing the joint. All of this is to be further reinforced by the later natural ankylosis of the area in the hip where the infection has occurred.

The cases operated were dressed in plaster *paris spicas*. They were allowed to walk with the protection of a *spica* in from nine to twelve weeks, and protection was continued on an average of ten months. Some minor complications occurred, but on the whole, the outcome of the procedure in the twenty cases was encouraging and sufficient time has elapsed since operation on these cases to come to satisfactory clinical conclusions.

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

ABOUT THIS AND THAT

The very air itself in these materialistic days is charged with thought about psychology, religion, conscience, theosophy, and myriad other such immaterial matters. Under the caption, "Conscience and Business," the editor of the Charlotte Observer, in the issue of that daily for August 15, discusses all too briefly the belief in God, in conscience,

and the influence on human conduct in this life of the belief in a system of rewards and punishments hereafter. One has little difficulty in reaching the tentative conclusion, at least, that the editor is firmly intrenched in orthodoxy, and that he believes inflexibly in the efficacy of hell, hanging, and of the administration of calomel in generous potions under certain grave conditions.

I was about to forget, too, that the dissertation makes its direct appeal to the psychiatrist because it was all called forth by the observation of the wife of a Southern banker that her husband had been irrational for more than ten years because of his expressed disbelief in the existence of God and of the soul. The editor is inclined to give validity to the pronouncement and to join the wife in the belief in her husband's mental abnormality. Almost daily with those of us who have to do with the mentally unsound, and ever so often with all other physicians who have to offer an opinion about the condition of the human mind, the question arises as to what constitutes in speech or in deed indubitable evidence of what is plainly called insanity. Should the expression of inability to believe in the existence of God and the feeling of positive assurance that conscience is not a constituent of a mere mortal be regarded by an examining lunacy commission as conclusive proof that the object of the inquiry was so abnormal in mind as to be certified as insane? Why? Should such an opinion be looked upon as a delusion? If so, would the examining doctors be justified in committing the person to a state hospital for holding to such a delusion? The world is packed with people who have mistaken ideas about many things, and it can scarcely be doubted that many go about their daily work who are actually deluded. But the opinions of most mortals are of little effect, whether the opinions be right or wrong. But a delusional idea, even with reference to the Divinity or otherwise, might not call for special attention unless it should bring about such changes in personal conduct as to make the person either a menace to his own safety or to that of others, or unless it caused him to become a public charge. I believe we should constantly encourage ourselves to make examination and analysis of our most fixed and cherished opinions with a view to

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modifying or abandoning them entirely if convinced of the wisdom of such a procedure. But open-mindedness seems impossible for most of us. It is less troublesome, perhaps, to hold to an opinion, just as it is less troublesome to keep a material possession, rather than replace it with a new one.

But about none of these things am I certain, and about that quality called conscience to which the Observer refers I would not venture to dogmatize at all. By it we mortals are most likely to think of that mental quality which either lends approval or else registers disapproval of the things which we think and the deeds that we do. But whether the quality be inherent, or acquired, whether it be susceptible of growth or of atrophy; whether it be changeable or unchangeable, I should prefer to remain in doubt for at least a period.

And at last, just before laying down his pen, the editor gives stout personal approval of the restraining influence of fear in human conduct. That belief is certainly almost universal and there can be no doubt of its orthodoxy. But I am not at all certain of its beneficence. Might we not all behave better if we could be made to know that we should have to pay right on the spot for any misdeed? Postponement of punishment always raises the hope of escape from it. And if we could believe that every good deed carried along with it immediate reward might we not be encouraged to labour more vigorously in a virtuous cause? Rewards and punishments should come from within, rather than from without, and I doubt not that in large measure they do. If fear could be banished from our lives I believe the world would be a better place in which to live. It does more harm medically than germs and parasites. And there should be some higher attribute to keep even a bank president in the paths of rectitude.

And, finally, even though the directing genius of the chain of banks had been mentally abnormal for fifteen years, is that cause for wonder that during that period he could make money or save it? Hardly. Once I knew in the latter days of his mental unsoundness a great industrialist. Even at the height of his great business achievement he was enormously influenced by the most weird delusional ideas. But they did not affect the soundness of his business judgment. And for

fifteen years or more not even his intimate associates knew that he was deluded—that he was incipiently and enormously insane. The annoyance and the harassment caused by the unhappy irrational ideas caused him to withdraw from practically all social life and to lose himself entirely in a hard, driving, tremendously successful business career.

From the late Joseph P. Caldwell I got the belief that the ability to make money is a manifestation of one of man's lower instincts. He, I am certain, regarded the trait as affording no evidence at all of large intellectual capacity or of moral worth.

SCIENCE AND RELIGION

In Harper's Magazine for August the Rev. Dr. Harry Emerson Fosdick writes under the title: "Will Science Displace God?" I have long felt that Dr. Fosdick's contributions to modern thought are always lucid, stimulating, and encouraging. He knows that lots of things are wrong with the world, but he is not pessimistic, and he thinks that most of the wrongs are correctible. Nowhere else have I read so sensible an essay about the supposed conflict that is now raging between science and religion as in the article just referred to. Dr. Fosdick calls attention to the well-known fact that primitive man made use of religion for purposes entirely selfish. God, so thought the ancients, was omnipotent and omniscient, and able to supply every human want. Religion was made use of by our remote ancestors in an effort to get on the good side of their God, so to speak, in order that they might wheedle out of him their hearts' desires. That attitude toward God did not disappear with medievalism but some residue of it is still in each of us. The thought of God as a boundless reservoir, as a great Pandora's box, still occupies a large place in modern thought, and much of so-called devotion is obviously only a trick used in trying to win the favor of the Great Omnipotent.

Dr. Fosdick has no fear that any scientific theory will ever be able to prove God nonexistent. There is no likelihood of that. But modern science is making the traditional God less and less necessary as the only source of supply of human needs. In the days of human ignorance man asked God to supply his needs; man could find no other way in which to gratify even his material wants. Religious

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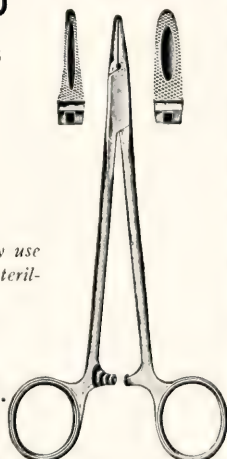
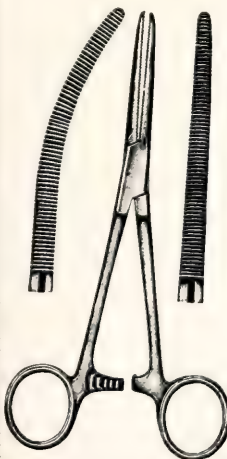
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observances were largely a catalogue of requests. Man resorted to most extreme methods to persuade God to give man what man thought he needed. Prayers were sent up for rain, for food, for children, for health, for protection, and for recovery from illness. But modern man has found out that he can satisfy most of his material needs by appeals to science. Many diseases are now treated scientifically and specifically; pestilences and deadly epidemics are often prevented or controlled; science has discovered how human life may be prolonged; famines have been made almost impossible through improved methods of transportation; most of man's knowledge of his environment has come to him within the last century and his relative mastery over it within the last half-century. As a substitute for muscular power man is now offered his choice of power furnished by the wind, water, steam, gasoline, and electricity. It has been estimated that through the multiplication of mechanical power every human being in the United States now has at his disposal in power the equivalent of at least ten human slaves. Through scientific knowledge man has supplied himself with food, clothing, artificial light, heat, mechanical substitutes for fingers and hands, and with power almost unlimited. Intelligent man no longer expects religious devotions to bring him the things that science has made possible.

These are to be had as the result of his own efforts. In this respect science is displacing the traditional God; adoration and worship which had as their objectives the gratification of physical needs are no longer necessary. The fear is not that God will be argued out of existence; as the college professor said in his chapel address, "God becomes progressively less essential to the running of the Universe." The reference must be, however, to the God of primitive man—to the Giver of all gifts,—and not to God as the idealization of all that is highest in man's aspirations. "Whenever any man discovers something greater than himself to which he gives his life in self-forgetting service, then religion has struck in its roots. There is such a thing as the 'religion of science' where men at all costs and hazards live for the love of truth. Knowing as I do some churchmen formally religious but really undevoted to anything higher than themselves, and some scientists formally irreligious but devoted with all their hearts to the love of light, I have no doubt what the judgment of the Most High would be. He who faithfully serves the More-than-self has, in so far, found religion." If that opinion be sound the medical and nursing professions should be filled with profoundly religious men and women, regardless of their sectarian opinions or attachments.



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BERNARD L. PETERSON

Technician Serology Department

McGuire Clinic, Richmond, Va.

Correspondence

CALIFORNIA AND WESTERN MEDICINE
Owned and Published by the California
Medical Association

San Francisco, Aug. 14, 1926.

Jas. M. Northington, M.D.,
Editor, Southern Medicine and Surgery,
Charlotte, N. C.

Dear Doctor Northington:

I have enjoyed reading your expose of a faker in your July issue.

There is no doubt but that such efforts are worthwhile and they could be made increasingly effective if doctors as a group would support and finance such activities. They will applaud until you get to striking too close to some of the twilight zone gentry who wear our cloak, and then trouble starts.

It costs money to secure evidence that will protect against libel in dealing aggressively with many of the worst fakers, particularly that group who buy the cooperation of some newspapers by advertising.

I look upon cleaning our own house and keeping it clean as even more important than going after the out and out faker. Bad as he is, he usually carries a label that all half-way intelligent people may read.

I wish you success in your efforts and shall read your discussions with pleasure.

Sincerely yours,

W. E. MUSGRAVE,

Editor.

STATE MEDICAL ASSOCIATION OF TEXAS
Publishers of the Texas State Journal of
Medicine

Fort Worth, Tex., Aug. 24, 1926.

Dr. J. M. Northington, Editor,
Southern Medicine and Surgery,
Charlotte, N. C.

Dear Doctor:

I am certainly pleased that your publication has become actively interested in quacks and quackery, and that you are succeeding in your endeavor to relieve at least some of your communities from this sort of pest. It is only through such efforts as these that this

meritorious service may be rendered. The people are not going to attend to the matter themselves. You have my best wishes and finest applause.

You may have noticed something of our fight along these and similar lines. Quacks and quackery constitute a small part of our concern. In Texas the osteopaths are required to take the regular examination, as are all of the cults, and the chiropractors are not licensed as a separate cult. Indeed, there is but one kind of practice of medicine in Texas so far as the law is concerned, and that is the kind that is presumed to be based upon scientific facts useful in medicine. We do not concern ourselves with the procedures of any of our practitioners. The law has no right to pass judgment on such matters, and it could not enforce its edicts if it had. We are now trying to see that all who would practice medicine, no matter through what method, are first licensed. There are only two organized groups opposing this plan, the chiropractors and the christian scientists. The latter can be ignored, but the former must be dealt with directly and forcefully. That we are doing. Our fight is not on the chiropractor, however, or any cult. It is on those who are practicing without a license, properly filed, from our State Board of Medical Examiners. We are in direct cooperation with the State Board of Medical Examiners. We have been spending more than \$25,000 per year in this effort, which includes much newspaper publicity and detective service.

Again assuring you that we appreciate your endeavors, and thanking you for calling the matter to my attention,

Fraternally,

HOLMAN TAYLOR,

Sec.

Charlotte, N. C., Sept. 2, 1926.

My Dear Dr. Northington:

On August 3rd I held, under the auspices of the State Board of Health, a Tonsil and Adenoid Clinic in the City of Wadesboro for

the County of Anson.

It was truly a revelation to me to realize for the first time, from first hand experience what the State of North Carolina is trying to do for her under-privileged children. It was my first opportunity to see from the inside this great work, and, having heard murmurings of doubt and criticism as to the justice and wisdom of these clinics, and from sources no less important than our own profession, I can not refrain from writing you with a hope you will lend the influence of *Southern Medicine and Surgery* to this necessary and important work the State has undertaken, believing that the Journal under your leadership has grown to a place of great importance and wide influence among the medical men of this State.

The 3rd of August was a wonderful day in my own life, with the bright sun and brisk breeze from the East, old Anson county could seldom have appealed more strongly. Such were the conditions as I drove from Charlotte to Wadesboro to meet the nurses of this won-

derfully organized clinic. There I found they had transformed a schoolhouse into a splendid, well equipped nose and throat hospital, where efficiency, with cheerfulness, was in full view of all who cared to observe. Clean, white cots in well ventilated rooms, a well appointed, properly lighted operating room, sterilizers, etc., with toys to divert and please the little ones who were waiting for the proper examinations. There a capable specialist went over the chest in each case, and a complete urinalysis was made. Then the operator was required to examine the throats of the patients and pass on the advisability of operation. The system was impressive, and, once for all, I should like to say that I sincerely believe the care of these patients is of as high an order as is offered in our best hospitals.

Now, I shall purposely avoid the mentioning of the name of any one of those connected with this particular clinic, for I fear I might inadvertently leave someone out, or stress someone's work more than another, which

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would be unfair, for, in all my professional experience, I never saw greater interest, care and tenderness than that shown by each member of this group of nurses. Interest, thoroughness, untiring patience and gentleness, and loving consideration for the care of the children and for the comforts and feelings of the often excited and distressed parents was the rule of the week. Never once did I encounter a bad spirit on the part of those working in the clinic. Practically every physician of the county cooperated by word and influence in helping to make this work easy and the results satisfactory. Many of the physicians called frequently in person and watched the group work, showing their interest in these children and the clinic. One physician brought four of his boy scouts, who had bad tonsils and adenoids, and had failed to come up to the physical mark during the summer. Such is the true spirit of devotion to the cause of humanity always in evidence in the medical profession when a work is worthy. A word about the splendid spirit shown by the parents. Many of these folks came for miles and would sit all day and well into the night by the cot, fanning and looking after the needs and wants of their child or children. That love of parent for child, and the desire to do the best possible for him in this life is certainly one of the greatest virtues of the human family, and among the few redeeming qualities of mankind: it shines conspicuous; nay pre-eminent. Some days as many as thirty or forty patients were turned away from the clinic and the distress of the parents was great when they were told there was no room for their child. Another word:—the efficient manner in which the county nurse had selected from the schools of the county the patients who needed the work most; and to see these large chronically affected tonsils and adenoids in poor little mouth-breathing children one was impressed with the vast possibilities of good in this work, for in the name of highest Heaven what chance could these diseased children have in the competitive race of this

intense age in which we live. Whatever may be the right solution to the wholesale removal of adult tonsils going on in America today for causes remote and uncertain, there can be no question of the urgent wisdom and necessity of removing these diseased and abnormal organs from children under 13 years of age. The good is most apparent to those who have had it done among their own children who needed such services and see under-nourished, backward children pick up and go forward to share in the work and joy of life with other healthy minds and bodies, building for our State a finer and more abundant citizenship.

I have written this in a most haphazard and general way, avoiding all technical terms with the one great wish uppermost in my mind and heart; and that is that Dr. Cooper and his fellow workers in this great work for the children of the State will have their hands upheld.

I am authoritatively informed that of the 100 cases cared for in this Anson County clinic, 43 were done entirely without charge. There is a recognized question to what extent the State should go in caring for the medical and surgical needs of its citizens. There will never be a serious question in the minds of right thinking people as to the advantage of rendering all possible aid to the welfare of the childhood of the State. Where there are serious and honest objectors to these tonsil and adenoid clinics, the objections I feel sure are based on some phase of the work which might be eliminated or remedied, such as the operators doing private cases during the week of the clinic, or too many people who could pay the regular charge getting in on these reduced charges, etc., etc. Such objections are trivial and unworthy indeed in face of the vast opportunities it offers to the needs and desires of the many who are hard pressed in trying to meet the cost of living and doing those things they feel best for the good of their loved ones.

Very truly yours,

JOHN HILL TUCKER.



NEWS ITEMS.

DR. H. H. BASS, formerly of Henderson, but for the past few years associated with Dr. W. L. Clark, in the conduct of the Clark-Bass Hospital, Philadelphia, has decided to come back to North Carolina. He will be located in Durham and have offices in the Piedmont Building.

DR. W. H. STEELE, aged 77, of Rockingham, died in the Charlotte Sanatorium on August 21. Dr. Steele is said to have been the first of the doctors of Richmond County to perform the operation of appendectomy.

CALDWELL HOSPITAL, Lenoir, N. C., was formally opened on Thursday evening, August 26th. The staff consists of Drs. L. A. Crowell, J. D. Rudisill, R. W. Petrie, and Miss Fannie R. Loden is superintendent.

THE NINTH DISTRICT MEDICAL SOCIETY meets in Mocksville on October 7th. Under its present officers: Dr. J. R. Terry, Lexington, *president*; Dr. M. R. Adams, Statesville, *councilor*; and Dr. J. W. Davis, States-

ville, *secretary*, this district society has developed to such a point that it is beginning to put out a pamphlet for the dissemination of Ninth District medical news among its doctors.

THE SEVENTH DISTRICT MEDICAL SOCIETY will meet in Shelby at 2 p. m. of October 12th. An especial effort is being made to have each county in the district represented on the programme.

MECKLENBURG COUNTY'S SANATORIUM for the TUBERCULOUS was opened for the admission of patients on September 8th. The ceremonies were gone through with on the 7th. The professional affairs of the institution will be conducted by Dr. John Donnelly, a native Mecklenburger, who brings the fruits of a rich experience to the service of those of the county afflicted with this disease.

DR. TOM A. WILLIAMS, formerly of Washington, now of Miami Beach, Florida, has resumed his work in neurology, since the healing of a fractured humerus.

REVIEW OF RECENT BOOKS

GOULD'S MEDICAL DICTIONARY, Containing all the words and phrases used in medicine and the allied sciences, with their proper pronunciation, derivation and definition, by George M. Gould, A.M., M.D., Author of "An Illustrated Dictionary of Medicine, Biology, and Allied Sciences," "The Practitioner's Medical Dictionary," "Pocket Medical Dictionary," "Biographic Clinics," etc. Edited by R. J. E. Scott, M.A., B.C.L., M.D., Fellow of the New York Academy of Medicine. Based on recent medical literature with many tables. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street. \$9.00.

One sentence in the preface is sufficient evidence of the fitness of the editor for his work; which sentence is: "Scientists, when about to assume the role of parents of new words, should whenever necessary, seek the aid of the man with a knowledge of Greek, rather than undergo (without the help of a specialist) the pangs of etymological labor

with the resulting birth of a linguistic monstrosity."

The notes on the history of lexicography are particularly fine. Without some knowledge of this history one can never properly value words.

The difficult and tedious labor of adding some new words, and rejecting others, has been carried out with discrimination.

One who has, perforce, to witness that some doctors use *inter-cranial* for *intra-cranial*, and some confuse the *peritoncum* with the *perinum*, can not fail to realize the need of a new medical dictionary to every doctor, and its absolute necessity to that great majority who write for publication. Whatever idea there once may have been among us that the correct use of words was effeminate and unworthy the serious attention of grown men, it has gone into the discard along with the

prejudice against baths between November and March.

THE SURGICAL TREATMENT OF GOITER, by Willard Bartlett, A.B., A.M., M.D., D.Sc., F.A.C.S., St. Louis, with foreword by Dr. Charles H. Mayo, Rochester, Minn. With 130 original illustrations. \$8.50. St. Louis, The C. V. Mosby Company, 1926.

In the first chapter there is an extended reference to a visit to Professor W. S. Halsted at his summer home near Lake Toxaway. This will probably be the first information to some North Carolinians that Dr. Halsted had a home in our State.

The chapter on pathology is written by Dr. Louis B. Wilson, whose exceptional abilities and opportunities enable him to speak with an authority few could command. "The Heart in Goitre" constitute a useful chapter from the pen of Dr. Samuel B. Grant, of St. Louis.

The unusual manifestations, indications for surgery, consideration of the patient needing more than one operation, preparation, anesthesia and even "position on table and draping of patient," are given separate chapters; and there are four chapters on technic.

Especially well covered are complications, after-treatment and recurrence.

The illustrations add much of illumination to the text.

DEFECTIVE MEMORY, ABSENT-MINDEDNESS AND THEIR TREATMENT, by Arnold Lcrand, M.D., Carlsbad, Czecho-Slovakia, Author of "Old Age Deferred," "Health Through Rational Diet," etc. \$3.00. Philadelphia, F. A. Davis Company, publishers, 1926.

Everyone would like to have a good memory. Few take the trouble to do the things necessary for the cultivation of one. A small number have not the mental powers to cultivate.

Much of this text is general knowledge; much is speculative or fanciful; some is superficial; a good deal is thought-provoking;—all is *interesting*.

Poe was not an "incorrigible drunkard;" nor was his middle name spelled "Allen." Osler's famous statement regarding the fortieth year is given a meaning not borne out by Osler's words.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, Third Series, volume the forty-seventh. Philadelphia, Printed for the College, 1925.

Philadelphia is a dignified and conservative city. Some have said that she negligently allowed the scepter of medical authority to pass to younger hands. Now it appears that there is a general tendency to return to conservatism and reliability, and Medical Philadelphia's stock is on the climb.

The Transactions of her College of Physicians compare favorably with the annually published papers of any Medical Society, Academy, or Clinic. They range from a study of "The So-called Reticulo-endothelial System: Its Relation to Phagocytosis, Defense Processes, Lipoid and Protein Metabolism, Destruction of Red Cells, and to Neoplasms;" to "The Treatment of Carbuncles." Nothing is too rare or too commonplace if it bears on disease of man.

The historical aspect is well taken care of in the "Suggestions" of the newly elected president, Dr. H. A. Hare, and in "Fifty Years" of Medicine, and of Surgery, by Dr. E. E. Montgomery and Dr. John B. Deaver, respectively. Dr. Chevalier Jackson appears on "Diverticula of the Esophagus;" which article is truly historic; and Dr. E. B. Krumbhaar's study of "Spontaneous Rupture of the Heart," based on 22 unpublished cases and 632 from the literature records history of the most interesting kind. Dr. Burton Chance gives a "Sketch of the Life of Sir Isaac Newton, and Dr. J. V. Ellson, by invitation, gives "The History of Appendicitis."

The papers of Drs. Stengel and Hirst, with the discussion, give reliable information on the results obtained in a number of cases from the Intravenous Use of Mercurochrome in Septicemia.

As a fine illustration of the research work being done in Philadelphia, and reported before this College, is cited Dr. Richard's Mary Scott Newbold Lecture on "The Nature and Mode of Regulation of Glomerular Function."

The Proceedings of the Sections on Ophthalmology, Otology and Laryngology contain dissertations on most of the disease conditions of these parts, usual and unusual. Case reports are especially abundant. The

"Use of Artificial Drum Membrane" is a subject which would appear to offer unusual interest.

The Proceedings of the Section on General Medicine show some items of rare value, as Dr. S. P. Reimann's paper, "Some Problems of the Laboratory as Illustrated by Blood Counts;" Dr. B. C. Crowell's on Relations Between Clinic and Laboratory; and that of Dr. Edgar Mayer, of Saranac Lake, on "Artificial Light Therapy in Tuberculosis."

This review touches only some of the most conspicuous features. The Transactions abound in articles, lectures and case reports covering practically every phase of medicine, historical and modern, in a manner to interest both the "scholarly physician" and the "practical doctor."

THE DUODENAL TUBE and Its Possibilities, by Max Einhorn, M.D., Professor of Medicine at the New York Postgraduate Medical School; Visiting Physician to the Lenox Hill Hospital, New York. Second Edition, revised and enlarged. Illustrated. Philadelphia, F. A. Davis Company, publishers, 1926. \$3.00.

A historic background is constructed and against this the duodenal tube and its apertures described, and functions ascribed to them. Importance is attached to the analysis of duodenal contents drawn off through the tube. The diagnostic import of the tube is discussed under the stomach and pylorus, the duodenum, the pancreas, and the liver, gall-bladder and biliary ducts.

Chapter 4 tells us about the tube as a therapeutic measure. Chapters 5 and 6 discuss other instruments for use in this part of the alimentary canal.

CANNULA IMPLANTS AND REVIEW OF IMPLANTATION TECHNIQUES IN ESTHETIC SURGERY, in two parts, by Charles Conrad Miller, M.D., The Oak Press, Chicago, 1926.

The title conveys a definite idea of the contents. The author is one of our pioneers in plastic, especially cosmetic, surgery. The reasons for rejecting certain materials and using others, and the technique of his operative procedures are given in detail. The large number of quotations from the reports of foreign authors indicates the attention be-

ing paid to this work in Europe.

ELECTROTHERMIC METHODS (Desiccation and Coagulation) in the Treatment of Neoplastic Diseases, Designed as a Practical Handbook of Surgical Electrotrotherapy for the Use of Practitioners and Students, by J. Douglas Morgan, B.A., M.D., Formerly Radiologist, Ross Pavilion, Royal Victoria Hospital, Montreal; Instructor in Radiology, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa.; Member of the British Institute of Radiology; Fellow of the Royal Society of Medicine, London, England; Member of the American Roentgen Ray Society. Illustrated with 36 line and half-tone engravings. Philadelphia, F. A. Davis Company, Publishers, 1926. \$2.50.

Starting with a clear and concise chapter on electricity (in which it is stated that a medical doctor laid the foundation of this modern science), the author passes on through a discussion of the chemical and physical effects of currents, to diathermy, desiccation, coagulation, etc.

Overenthusiastic reports from persons of little balance, along with claims bordering on the "cure-all," put out by manufacturers, have had the effect of causing some to undervalue these methods. The author of this work has associations which entitle his expressions to acceptance as honest and intelligent opinions; his very moderate claims for the method incline to confidence, and his clearness of expression make for understanding of the text.

This book should have a great influence toward bringing order out of the great confusion existing in the minds of medical men as to how far electrothermic methods should be used to replace or supplement other measures.

THE DIABETIC LIFE, Its Control by Diet and Insulin, A Concise Practical Manual for Practitioners and Patients, by R. D. Lawrence, M.A., M.D., Chemical Pathologist and Lecturer in Chemical Pathology, King's College Hospital, London. Second Edition, with 11 illustrations. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut St., 1926. \$2.50.

There is an orderly progression: normal and diabetic metabolism; the causation and pathology of diabetes; the symptoms and diagnosis, and the treatment before and since insulin.

The prevention and cure of complications

are given much space incidentally and specifically. There are chapters on the treatment of children with diabetes, the treatment of operations and gangrene in diabetics and

the essentials of a diabetic education.

Useful as the little book will be to practitioners, we are of the opinion that only the very exceptional patient will be able to assimilate it.

MISCELLANY

HIGH MATERNAL MORTALITY RATES IN THE UNITED STATES

Maternal mortality rates in the United States are today among the highest in the civilized world, and but a slight decrease in these rates has occurred since the beginning of the present century, according to Dr. R. M. Woodbury, of the Children's Bureau of the U. S. Department of Labor. The significance of these facts from a national point of view is found not only in the loss which this means of the lives of women presumably at their prime, but also in the far-reaching effect of maternal mortality on the infant death rate.

Analysis of various factors affecting these statistics, particularly the campaign for better certification of the causes of death during recent years, would indicate in reality a "very slightly downward trend" since 1900.

Comparison of the United States rates with those of other countries shows that the United States ranks among those having the highest rates, such as New Zealand and Chile. *Among the countries having rates less than half that of the United States are Denmark, Finland, Italy, Japan, the Netherlands, Norway, Sweden, and Uruguay.*

CAUSES OF MATERNAL MORTALITY

Analysis of the causes of maternal deaths in this country shows that the most important single cause is puerperal septicemia, due to infection resulting from lack of surgical cleanliness and almost 100 per cent preventable through careful asepsis. Two-fifths of the maternal deaths in the death-registration area of 1921 were due to septicemia. Among other causes, puerperal albuminuria and convulsions was most important, contributing over one-fourth of the deaths. This cause is preventable through competent medical care during the prenatal and confinement period. Other causes of death included accidents of pregnancy, hemorrhage, accidents of labor.

MATERNAL MORTALITY LARGELY PREVENTABLE

Almost all puerperal septicemia is preventable. Puerperal septicemia is infectious in origin, and its prevention depends upon the rigorous observance of asepsis. The Australian committee appointed to study the causes of death and invalidity in the Commonwealth states: "Puerperal septicemia is probably the greatest reproach which any civilized nation can by its own negligence offer to itself. It can be prevented by a degree of care which is not excessive or meticulous, requiring only ordinary intelligence and

some careful training."

For the prevention of the most important causes of maternal deaths the essential recommendations by the bureau are: Effective supervision by a public-health agency over hospitals and over the training and admittance to practice of physicians, midwives, and nurses, and the requirement that all cases must be reported, as in the case of other infectious diseases. The experience of Norway is cited. In that country puerperal septicemia was early made a reportable disease and measures of public control instituted. The result has been the elimination of four-fifths of the cases of the disease and the virtual elimination of deaths from it. Similar striking decreases have occurred in England and Wales and the Netherlands. Of especial interest as a demonstration of what can be done in a large city in this country are figures from New York City showing a steady drop in the rate from 4.1 in 1900 to 2.5 in 1921, a rate still considerably higher than those for the countries mentioned, however.

A PREVENTIVE PROGRAM

The preventive program suggested by the report, in its main outline, follows:

(1) Regulation of the practice of obstetrics, by requiring a license to practice from both physicians and midwives, by establishing minimum requirements for obtaining such a license, and by defining and prescribing penalties for malpractice.

(2) Regulation of public and private hospitals and maternity homes through legal provisions governing the establishment of such institutions and requiring that they be licensed and subject to inspection.

(3) Legislation for the control of venereal diseases including the making of these diseases reportable.

(4) Requiring that puerperal septicemia be made reportable, as is now the case in a number of States.

(5) Provision through governmental or public sources of better facilities for training medical and nursing personnel and more adequate clinics, hospitals, and maternity homes.

(6) Subsidies in aid of State or local activities by Federal or State governments, as in the United States during the past four years through the Maternity and Infancy Act.

(7) Educational work directed toward informing mothers of the need of adequate maternity care.—Abstract of Report Children's Bureau, U. S. Department of Labor, Released August 30, 1926.



CRIME AS A MANIFESTATION OF MENTAL UNSOUNDNESS*

JAS. K. HALL, M.D., Richmond

Man is perhaps the most responsive of all living things. Portions of his central nervous system, known commonly as the special sense organs, are pushed as far away from his brain as possible and as far out into his immediate environment as is compatible with their safety. They are his aerials, so to speak, his antennae. These far-flung extensions of his sensory nervous system pick up information about the world around man and pour it into his brain. These in-pouring impulses are the first things in the way of knowledge. From them are derived sensations, and out of the development of sensations and their association with past experiences fully developed conscious life is made possible. From the central nervous system another network of fibres pass out to the muscles, and along these motor fibres impulses are reflected which result in movement. Through this latter mechanism man responds to his surroundings, and becomes a moving creature. Thus he is a sentient being, who feels and comprehends his environment, and through his movements his responses to that environment are made known. His sensory apparatus enables him to feel and to know; his motor mechanism makes it possible for him to move, to change his habitat, to ward off, to apprehend—in short, to impress himself upon the world around him. Thus we have in briefest possible outline a sketch of the nervous system—that wonderful apparatus by means of which man is made conscious of the universe and by which it is possible for him to attempt, at

least, to adapt himself to it.

And this reaction of the living thing to the neighborhood is what we mean by behavior. The individual may be unconscious of the process, as in early infancy, in sleep, and in stupor. The responses may be instinctive, known or unknown to the individual. Behavior may be involuntary—carried on without reference to the will. It may be highly voluntary—a majestic and dignified expression of the will. But whatever man's behavior may be, instinctive or acquired, involuntary or voluntary, wise or foolish, hurtful or helpful, benign or malignant, it portrays to the world in unmistakable terms the personality of the individual. It must be a psychological fact that every idea, big or little, begets some kind of movement. The muscular response to the ideation may be gross, as in physical labor, or small and hidden away, as in the change of the size of the pupil, the quickening of the heart's action, or in the deepening of respiration. But, as the man thinketh he behaveth, and by his behavior he is known.

Long before consciousness makes itself known certain instincts are active in their beneficent work of protecting and developing the individual. The instinct to live causes the babe to search for and to grasp the nipple; the same instinct causes the speechless little one to convey into its mouth all small detached objects in the blind hope that they may be nutritious. But with the development of consciousness troubles come—self-directed activities come into conflict with instinctive trends, with customs, conventions, morals—and life's warfare is on. The natural

*Read by invitation before the Ninth District Medical Society at Mocksville, North Carolina, October 7, 1926.

tendency must be in the direction of unhampered responses; instinct is, I assume, ethically neutral. I am unable to conceive of instinctive behavior as moral or immoral. It is, and no more. To be perfectly natural must mean to be perfectly free and unrestrained in every response to one's environment. To be civilized is to be enabled to understand that all reactions cannot be exhibited. To be cultured means that most of man's primal impulses must be repressed. Savagery implies expression; civilization implies repression. Individuality asks for free expression; the herd-instinct calls for certain repressions. A conflict arises. Consciousness has developed; modifications of natural behavior have arisen; personal civilization is being born; law has come into existence; customs, conventions, morals, codes, and standards, have come as helps or as hindrances.

Certain violations of behavior constitute crime. The very word crime is interesting. I think it comes to us out of the Latin, but still more remotely from the Greek. In ancient days the root of the word, it seems to me, carried with it the suggestion of a sieve—a mechanical contrivance by which some things were separated from others. And so in our modern life the law is that sieve through which behavior is run. We might assume that those particles of conduct too coarse and gross and irregular to pass through the meshes of the sieve are crimes. But in sitting in judgment on the operation of the sieve man displays his usual egotism. He exercises what he chooses to call his discriminating sense, and he calls unhesitatingly this act of his neighbor good and that act bad. But whether this be true or untrue depends, we know all too well, upon the soundness of the judgment of the judge. It depends, to speak mechanically again, upon whether the sieve be made right or wrong. And the very existence of crime necessarily implies, it would seem to me, the existence of a minority and of a majority. Only a minority can commit crime; only a majority has sufficient force to enable it to catalogue behavior as good or as bad. Crime is committed always by a minority. A rebel is a member of a minority. A number of rebels sufficient to bring an overthrow resulting in success establish a new code of behavior. This new

standard of behavior which had been wrong then promptly becomes right. The recent minority become the law-makers. Prior to Yorktown George Washington, from the British point-of-view, was a criminal; after that date he became a patriot. The Londoner of today looks upon his monument. Sufficient additions to the numbers of the minority transform it into the majority. Thus the acts formerly criminal become of good character. What was wrong becomes right; what had been right becomes wrong.

Crime is conduct so unsocial as to be thought worthy of punishment. The mere existence of crime bespeaks likewise the co-existence of some degree of civilization. In the most primitive society there can be no wrong and no right save that of mere brute force and might. In more enlightened society a social conscience exists and to this community-censor bad conduct is objectionable. In legislative assemblage conduct of the bad sort is catalogued and stigmatized, and those who engage in it are thought to be unworthy citizens, destructive to the group-organization, and their disintegrative tendencies are warred against by statutory enactment. The herd must be preserved even though the individual be made to suffer or be sacrificed. The very arbitrariness of the conception of criminal behavior attributes to the majority—the law-making body—an enormous degree of omniscience. The word crime of itself implies a clash of human opinions—a difference in judgment of two or more individuals about the quality of an act. Condemnation of the statutory kind calls for the existence of a larger group, sitting in solemn session in disapproval of the behavior of the smaller and the weaker group. In warfare individual rights perish; in warfare international law disappears in the clash of nation against nation.

And what after all is the essence of the particular type of behavior called criminal? Does the stigmatization inhere in the mere mechanical movements of the human physical apparatus? Is it the simple flexion of the index finger that brings about the explosion resulting in the release of the winged leaden angel of death? Or must we believe that in the destructive state of mind back of the bending finger lies that sinful state called murder? After all, is punishment inflicted

because of the perpetration of an act, or because of the unsocial state of mind back of the act? I fear that I may be leading myself into waters whose depth may be above my nostrils.

I am unlearned in comparative psychology and I am unable, therefore, to assert that man is perhaps the only animal able to comprehend his own behavior. The playing puppy, the frisking kitten, the frolicsome lamb, and the carolling mocking bird are probably only yielding to impulses which they can neither understand nor modify. But the mental mechanism of man, out of which all his behavior flows, carries concealed in it somewhere the ability to initiate, to comprehend, to modify, and even to suppress the very conduct which it liberates. It may be true that only the mind of man can contemplate itself.

Man entertains the hope that he may have hidden away in his higher faculties at all times the ability to modify his own conduct so that it may comfortably and without friction interdigitate into the conduct of the members of the group around him. But is that statement always true? Are we surprised to discover that harmful and destructive maladjustments are not infrequent? Is it possible for us to conceive of man as so omniscient as to enable him to know always that the welfare of the group is his welfare: that selfishness is both hurtful and sinful: that many of his instinctive trends are self-destructive in tendency: that his highest effort must be to sustain those forces that protected him in infancy, that shielded him in adult life, and that stand guard over his property even after his death? If we are able to conceive of man in such fashion are we able also to think of him as endowed with the inflexible purposes and the necessary power to carry into successful action all his highmindedness? All these myriad adjustments man must make without bringing about serious clashes with his neighbor or with his neighbor's goods, otherwise man has become a criminal.

It must be a fact easy of substantiation that man is most ignorant of the familiar facts of life. It is undeniably true that we medical men know least about those diseases that we encounter most frequently. In the list are measles, mumps, and chickenpox. We

should not think it strange, therefore, that we are rather profoundly ignorant of the fundamental facts of human behavior. We scarcely know what the phenomenon is. Instinct, the earliest exhibition in life of activity suggestive of conduct, is still a mystery to us. What is instinct? May we think of it as "the faculty of acting in such a way as to produce certain ends, without knowledge of the ends, and without previous training in the performance of the acts which lead to those ends." The yearling bird builds such a nest as those of her kind have built for ages, yet she has had no instruction in the complex and delicate fabrication. The twenty-four-hour-old chick, just released from the utter darkness of the incubator, makes perfect use in the brooder-house of the water, food, and heat placed there for its welfare. Instinct remains perhaps the only guide the lower animal has for its development, protection and perpetuation. Yet the perfection of the activity of this mysterious quality is attested by the fact that most species have survived throughout the ages in spite of man's warfare against them, and in spite of their warfare against each other. Contrary to general opinion man is abundantly supplied with instincts—much more generously, perhaps, than any of the so-called lower animals. Education can do for man probably no more than to enable him to develop certain instincts and to modify or to repress others. Our instincts are our natural selves; all other manifestations of conduct represent the acquisitions or the impositions that have taken place throughout the aeons of man's ascent out of the lower animal world.

My own belief is that man experiences relatively little difficulty in adjusting himself with tolerable satisfaction to the material world immediately around him. He can care for his physiological reactions to heat, to cold, to darkness, to light, to existence high in the air, and to life deep down in the earth or in the depths of the waters. Man has learnt, as a rule, to bear with commendable equanimity the loss of loved ones and of his material possessions. He fights, sometimes he surrenders, and he dies when necessary. I am convinced that man's struggle with matter is not his chiefest concern. Man experiences most difficulty with the world within himself and with the opinions of his fellowman.

Abstractions, not matter, bother him most. In adolescence, especially, the chief troubles are with his inherent instincts. Most of the acts that we would instinctively, and therefore most easily perform, are not countenanced. They are frowned upon. The youngster is driven, therefore, to the necessity of replacing one kind of instinctive behavior by another, or else to the attempt to suppress entirely such behavior. Instinctive urges that can not be repressed or deflected gives rise to the commission of much crime—crime against the person of another, and against the property of another. In such unsocial behavior the inhibitory faculty works poorly. Individuals who make assaults upon the person of another, as in sexual attacks, and as in fisticuffs, have not escaped from the dominating influence of primal instincts. The mighty battles of the world have not been fought upon military fields, but they have taken place within the mental life of individuals. The conflict has been between the urges of primitive instincts and the forces of so-called civilization. Fighting is instinctive, and for that reason wars will continue to be fought.

Next to the difficulty that man experiences within himself is the trouble that he encounters in adjusting himself to the mental states of his neighbors. Herein the chief trouble in living lies. We are all ignorant, prejudiced, superstitious, covetous, intolerant, and tyrannical. We are anxious to acquire the goods of our neighbor and to bring him under the tyranny of our own thinking. The origin of much law lies, I should say, in the desire of some individual or group of individuals to exercise tyranny over the mental life of others or to gain possession of the property of other individuals. Abstract principles may not be so influential as we might imagine in the formulation of laws. It cannot be otherwise. The instinct to live makes it so.

I continue to think about crime, even if I be not continuously talking about it. The universe is infinitely more spacious and complex than ever before. We are called upon constantly to react to things that our fathers knew not of. The racial past is ever enlarging and it is a large factor in the mental life of every thoughtful person. Myriad mechanical contrivances, inconceivably complicated and undreamed of by our ancestors,

have become necessary curses in our daily lives. Our lives have been motorized and mechanized so that individually we come into contact with an increasing number of people. Not infrequently we come into collision with others. Our movements are hurried. Laws have multiplied even more rapidly perhaps than mechanical devices have increased in number. Man is now troubled, if not actually hampered, by many of these legal enactments. The behavior that was formerly in good standing has, in many instances, been made lawless simply by legislative fiat. No longer can man eat or drink what he will. No longer can he use this or that side of the roadway in his travels. No longer is he able to exercise absolute authority in the rearing and the education of his children. Modern man lives encompassed round about by legal restrictions and annoyances. Most of his individual freedom has been sacrificed for the good of the herd. It has been a sorry trade.

Have I dwelt long enough and comprehensively enough on the difficulty of living in these latter days? In comparison dying is easy. Do you wonder at the failures in this high art of living? Do we not have to turn our gaze away from the human wreckage strewn alongside the roadway that civilization has traveled? I do not know what civilization is, but I do know that the demands made by it call for enormous sacrifices. Our modern life is filled with deceptions, hypocricies, pretenses, bravadoes, insincerities, poses, dramatizations that bring blushes to the face of Truth herself. I see individuals trying to live high social lives for which they have no fitness in wealth, attainments, or in temperament. And I see others trying to practice a profession for which they have neither inherent capacity nor acquired training. And everywhere around me I look upon human beings standing on tip-toe in a vain effort to reach up to the demands of the conventions and customs and standards of these unhalloved times. And in such strained positions these poor humans grow weak and faint. Is it any wonder that some of them become insane, that some of them become criminals, that others become derelicts, paupers, dependents—and that a multitudinous host resort to the use of drugs or liquors? In this group of addicts we find those who are looking in vain for strength from sources outside

themselves, and here we find also the myriads who are either unwilling or unable to live their lives in the prosaic world in which fortune has cast them. Many of them are attempting to replace the world of reality with a world of unreality, projected from their own brains—a world as they would have it to be, but as it can never be. Primitive human life probably knows nothing of such failures and tragedies and disorders. They are the products of what we call civilization and culture. Is civilization worth what we pay for it? Have we not been bit in the trade?

The use of figures must often be resorted to for the purpose of giving concrete examples. The Commonwealth of Virginia has a population of a little more than two and a quarter millions. North Carolina's population is somewhat larger. Certain disorders of conduct must be taken notice of by the law. In 1925 there were committed to the jails in Virginia 31,957 prisoners. In that year practically 900 were sent to the State Penitentiary, and in addition almost 500 juveniles were sent to reformatories. In the fifteen-year period preceding 1925 the population of the State increased 10 per cent while the criminal population institutions decreased more than 25 per cent. In that same year—1925—1,565 individuals were committed to the institutions for the mentally disordered in Virginia. The cost of operation of the institutions for the mentally diseased in the year 1925 amounted to \$1,127,739.64—almost double the cost of the operation in 1910. I should say that there are in jails, in the penitentiary, in the reformatories, and in the various institutions for the mentally disordered in Virginia today no less than twelve thousand human beings. The insane population in the State has increased within the last 15 years 30 per cent. If you have doubt about the importance and the consequence of conduct disorders I beg you to think upon these figures. I make use of them because I have not at hand similar data for North Carolina. The two States are not unlike and what is true of one State in these respects must be likewise more or less true of the other. The cost of apprehending, convicting, and maintaining violators of the law makes an appalling sum. The figures in North Carolina as well as in Virginia would mount far into the millions.

And now may we ask what is being done in the way of reaching an understanding of what all this so-called criminal conduct means? Why do human beings commit criminal acts? For a good many years I have spent much of my time in medical work amongst prisoners in the State Penitentiary. At least 25 per cent of them are known to be definitely feeble-minded to such a degree as to affect their conduct. A certain number of them are epileptic; 20 per cent of them are syphilitic; more than 10 per cent of them are psychopathic—that is, their mental makeup is such that they are highly asocial and therefore maladjusted to whatever environment they may be in. A smaller number of them are actually insane, and in consequence of that fact many of them are being regularly transferred to the institution for the criminal insane. Is it unreasonable to suppose that painstaking investigation would find a still larger number more or less irresponsible?

Is punishment the proper way in which to bring about restoration to mental normality? The investigation of the mental condition of those prisoners should have been carried on before the crimes were committed, or, if that were impossible, before the trials were held. Is any such activity going on in North Carolina? It is high time it were undertaken. In the State of Massachusetts all those charged with a capital offense, and all those who have been previously convicted of any kind of crime, are mentally examined by medical men specially trained in such work. The written report of such examinations is filed with the clerk of the court, and is accessible to the court, the prosecution, the defense, and it is also usable as evidence. Such an examination practically makes impossible the trial of an irresponsible person, and it tends to make unlikely the use of the so-called insanity dodge. Underlying the law must be the fear that capital offenders and those who continue to commit crimes may not be mentally sound.

I hope I may never have blind adoration for law. For sensible laws I have profound respect; for senseless laws I shall try to maintain disrespect. Certain human beings have certain capabilities; others are without them. The individual who is color blind is not punished for his inherent defect. No amount of

punishment could give him perfect vision. Many individuals cannot live in conformity to the law. It is beyond their mental capacity. It behooves society to find them out and to find out why they are so constituted.

History is filled with recorded evidences of the tragic failures properly and justly to interpret the law and to apply it. Many of the world's great ones have suffered on account of the ignorance of their fellowmen. Moses died a fugitive from Egyptian law; Socrates was sent to his death; the Carpenter of Nazareth was crucified for sins that he never committed; many of his apostles paid with their lives for their opinions; John Bunyan sent his spiritual messages to us from a

jail; yet each of these was tried, I presume, and convicted in a learned, dignified and solemn court. But judges, jurors, and court officers have become lost in the dust of oblivion. The prosecuted and convicted and executed live on. It is wrong to expect too much of a mere mortal. God alone is competent to occupy the judgment seat.

The other day at the University founded by Thomas Jefferson, and many thought him a godless man, I saw cut in Greek letters deep in the stones of one of the buildings these words: "And ye shall know the truth and the truth shall make you free." We can do no better than adopt the divine saying as our guide.

PREOPERATIVE FLUOROSCOPIC EXAMINATION OF THE CHEST*

S. A. RHYNE, M.D.,

Davis Hospital, Statesville

In the routine examination of the heart and lungs, as ordinarily done before operation, certain conditions might possibly be overlooked without the aid of the fluoroscope. The time required for a complete fluoroscopic examination of the chest is not great. Only a few moments are required for each patient, and if done in a systematic way a number can be fluoroscoped on the morning of the operation.

The routine of our fluoroscopic examination is as follows: The patient is stripped to the waist and placed behind a vertical fluoroscope. On this inspection the heart and aorta are noted in their relationship to the size and contour of the chest. The contour of the diaphragm on both sides is observed and the general density of the lung field noted. It is not difficult after observing the chest for a long time to very readily learn to recognize the normal proportion between the cardiovascular shadow and the chest wall. The left

border of the heart should not normally extend more than half way from the mid-clavicular line to the lateral chest wall.

Next the apices are observed and the patient is instructed to allow his shoulders to drop so as to throw the clavicles out of the direct line of illumination through the extreme apex of the lung on either side. Then the patient is instructed to cough, a procedure which normally causes a transient but very distinct lessening in density showing a lightening in the apical shadow. Next the contour and pulsation of the aorta are observed. The cardiophrenic and costophrenic angles are now observed to determine whether or not they are partially obliterated by adhesions. During the inspection the patient is instructed to breathe deeply from time to time and note is made of whether the diaphragm performs a natural excursion on both sides with each inspiration and expiration.

With the aid of such an examination before each surgical operation, there are num-

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erous instances where the following conditions may be disclosed:

- (1) Pneumonia
- (2) Tuberculous lesions
- (3) Fluid in the pleural cavity
- (4) Localized collection of fluid
- (5) Tumors, malignancies, especially of the lungs or mediastinum
- (6) Cardiac enlargement
- (7) Pericarditis with effusion
- (8) Aneurism of aorta
- (9) Limited expansion of the diaphragm
- (10) Bony growth or deformity of the ribs or spine.

Considering them in order:

(1) All of us have seen patients in the first stages of pneumonia with a small, centrally located area of involvement. It may be several days before a definite diagnosis of pneumonia can be made by a stethoscope and percussion, while a slight fluoroscopic examination would very readily disclose this condition.

(2) In tuberculous conditions it is not possible to definitely diagnose early lesions with the fluoroscope but we can very readily determine if there is any variation of density or lightening up of lung substance that would be suspicious. If this condition is found, then the stereoscopic chest films are made to determine a definite diagnosis.

(3) Fluid in the pleural cavity is usually diagnosed from a clinical standpoint, but the fluoroscope gives us many valuable points in connection with the physical examination. The patient is placed in various positions, showing fluid level in the upright and horizontal positions. Also we derive valuable benefit from determining the consistency and amount of free fluid in the chest.

(4) In interlobar collections of fluid there are numerous instances in which the patient presents a typical clinical history of empyema, but it is difficult to locate by a physical examination a definite area of dullness, while a very brief fluoroscopic examination would reveal the exact location of the fluid.

(5) Tumors of the mediastinum and lungs are not uncommon and can usually be found on fluoroscopic examination, and later stereoscopic films are made for record and to bring

out the finer points in the x-ray diagnosis. In Hodgkin's disease, we often find an enlargement of mediastinal glands. Syphilis of the lungs is often manifested in the form of small hard gummata throughout the lungs. Primary and secondary malignancies are very often found either in the mediastinum or occasionally springing from the costal pleura.

(6) Cardiac enlargement can very readily be detected by a brief fluoroscopic examination.

(7) In pericarditis with effusion, we get very much the same shadow as in cardiac enlargement but the aid of the fluoroscope is very valuable in differentiating the conditions. In cardiac enlargement, there is always a constant movement of the heart muscle, while in pericarditis with effusion the heart shadow may be the same size but there is a marked decrease of pulsation of the heart muscle with each beat.

(8) Aneurism of the aorta is very readily detected by casting a shadow which is recognized as an enlarged part of the aorta. It is a very simple matter to trace the upper border of a shadow cast by the aneurism by noting a small pulsation of the shadow.

(9) Limited expansion of the diaphragm is very readily detected by having the patient inhale and exhale very slowly. There are numerous conditions in which we might get a limited excursion of the diaphragm; some are pleural adhesions, diaphragmatic hernia, abscess of liver or malignant conditions of liver.

(10) Bony growth and supernumerary ribs are often found under fluoroscopic examination.

CONCLUSIONS

(1) A fluoroscopic examination of the chest will disclose certain conditions which are sometimes difficult to detect by physical examination.

(2) This is an added factor in the reduction of mortality in surgery if carried out routinely in preoperative cases especially if a general anesthetic is to be given. In certain instances this might not be necessary, but in the majority of cases it is well worth the time and trouble required.

CARCINOMA OF THE BREAST AND ITS TREATMENT BY SURGERY, X-RAYS AND RADIUM*

H. HARTWELL BASS, M.D., Durham

Until the discovery of radium and the roentgen ray, the treatment of cancer of the breast was by surgery alone, and the surgeon considered his results excellent if thirty per cent of his patients reached the five-year period. He at first referred his inoperable patients to the radiologist, hoping that some result might be obtained or that life might be prolonged. This, in a measure, was accomplished. Later he referred his patients for post-operative radiation, and in more recent years, most surgeons are advocating both preoperative and postoperative radiation.

The plan of treatment as advocated by the Clark-Bass Hospital, Philadelphia, and which has been followed for a number of years, was evolved by Dr. William L. Clark. The devitalizing effect of massive doses of x-ray radiation upon normal tissue had been observed. The lethal dose, when applied by high tension short wave x-ray in one or two treatments, not only had an influence upon the cancer cells, but on normal tissue as well, with the result that the patient's resistance was lowered, and should there be a recurrence of the growth, the limit of radiation by this method had been reached and the patient hopelessly doomed.

The action of the electron upon tissue, whether by ionization, electrolysis, or direct destruction of the cancer cells, only hastens nature's effort—fibrosis. A number of patients treated by massive doses of x-ray and radium have been observed where the lung structures, far removed from the cancerous invasion, were excessively fibrosed. The normal tissue's vitality was lowered and the patient soon succumbed to secondary invasion. This result led to further research into this method of treatment.

We advocate the lethal dose, but believe it should be divided into daily fractional doses extending over a period of time, and from our observations of this method of treatment, we draw the following conclusions:

1. Normal tissues are conserved and, in many instances, benefited by round cell infiltration, which represents the natural defensive process against the invasion of the cancer cells.

2. Excessive fibrosis, especially through the lung tissue, is limited.

3. Slow and repeated radiation may produce, by cytotoxicity of the cancer cells, antigenous substances which would, by production of antibodies, increase the resisting power of the patient.

4. Radiation can be continued, when necessary, for an indefinite time without detriment to normal structures or the patient's general health.

5. An improved condition immediately from this method of treatment in a recurrence after the limit of radiation of the massive dose method.

6. X-ray burns are virtually unknown, there being ample time between treatments for observing possible skin irritation and opportunity for prolonging the intervals as may be necessary.

Inoperable cases with axillary and supraclavicular involvement have cleared up and shortly thereafter become operable.

Knowing the dangers of early metastasis, and that the size of the lesion is no criterion, we advocate, as a routine procedure, preoperative radiation in fractional doses.

The object of this paper is not to condemn surgery, but to assist the surgeon. Closer co-operation should exist between the surgeon and the radiologist, both recognizing that best results can be thus obtained.

No attempt will be made to describe the different operative procedures in the treat-

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

ment of cancer of the breast. References only will be made to certain surgical facts found beneficial in our work at the Clark-Bass Hospital. We strongly recommend pre-radiation, and allowing sufficient time between preradiation and operation for the full effect of radiation. We believe the advantageous time to operate is when fibrosis is at its maximum, that is, before secondary contraction or shrinking takes place in the tissue. The process of repair takes place both by hypertrophy and by hyperplasia of the cellular elements. It is impossible to completely destroy by radiation all cancer cells in the tissues, but when fibrosis has reached its maximum, these cells are devitalized and their reproductive power impaired, while after contraction, they may be mechanically forced out into the tissue again and their activity restored. The advisability of radical procedure from a surgical standpoint is to be doubted. Diseased tissue only should be removed. To break down nature's barrier by destroying normal lymphatic glands is not logical. The gland structure itself acts as a filter for the lymph current and prevents diseased tissue entering the blood stream. The surgical removal of involved glands should be done as of primary lesions. From a study of the lymphatic supply of the breast and surrounding structures, the impossibility of removing all tissues in the area subject to metastasis becomes evident. If the lesion is located in the outer part of the breast operative procedure has a chance to remove the possibility of metastasis; but if the lesion is in the sternal half surgery alone cannot bring relief, as the lymphatics lead directly from the lesion, through the second, third and fourth intercostal spaces, to the mediastinal contents and inner structures of the chest wall, and also to the other breast.

Care should be exercised in handling the breast, as there is a possibility of dislodging cancer cells and thereby producing an early metastasis.

Less importance is attached to the kind of lesion than to the type. All malignant growths are classified according to the preponderance of differentiated and undifferentiated cells present in the lesion. Where there is a preponderance of undifferentiated cells the chance of metastasis is greater and the tumor more malignant, and vice versa.

These classifications are made according to Broders of the Mayo Clinic, and should be done by frozen section at the time of operation.

The response of the lesion to preradiation is a test toward the results that might be expected. Patients who do not respond to preradiation treatment by fractional technic cannot hope to be relieved by surgery if there is a metastatic involvement. Both prognosis and statistics could be improved if more attention were paid to the individual type of lesion and not so much to the clinical type.

Some types of cancer are best treated by radium, depending upon the location of the lesion and the condition of the patient. The use of radium element is advocated in the form of needles or pads, and not the emanation seed or bare tubes. It has been our experience that the emanation seed acts as a foreign body in the tissue and eventually produces trouble. The time factor cannot be taken into consideration with the emanation seed, which oftentimes are planted too close to bone, thus producing necrosis.

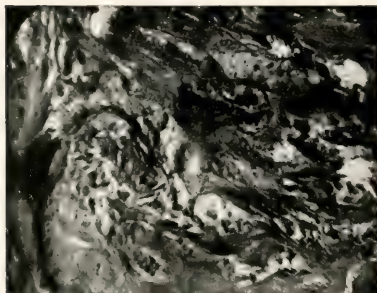
Radium needles are inserted into the zone wall surrounding the tumor mass as well as into the mass. The axillary glands, when not involved, can be radiated with the radium pad, mapping the region into squares and radiating each square for a certain period. Thus complete crossfire of the entire area is obtained and thorough radiation of any structures which might be subject to metastasis. Each diseased gland should be radiated by inserting into it the needles under the same procedure as with the primary lesion.

High frequency currents, in the form of desiccation and coagulation, are effective in those lesions of the breast where there are raw bleeding surfaces.

Our experience with the so-called radio knife, as described by Wyeth of New York, has not proven of any special advantage in breast amputations. If the current is sustained sufficiently long to control bleeding, then the tissue is charred and healing is not by primary union. If the current is used to make a clear-cut incision, then hemorrhage is not controlled and the use of this knife has no advantage over the scalpel.

Postoperative x-ray radiation should be employed in all cases, with the hope of de-

stroying any cells undergoing metastasis which might have been dislodged during the operative procedure. Fractional x-ray radiation is advocated in this procedure. Several series of lethal doses should be given. Post-radiation should follow the operation as soon as the physical condition of the patient will allow. A series of daily radiation of from three to five minutes to each portal should be given until the patient has received the lethal dose, using as many portals as are necessary to produce a complete crossfire. Two series of treatments generally suffice, save in exceptional cases. The patient is, as



SECTION. Carcinoma of breast after treatment by fractional high tension x-ray radiation, showing the effects of tissue changes by walling off the malignant cells by fibrosis.

a rule, given a rest period of from three to four weeks between series.

No class of patients require closer watching and observation than do those with carcinoma of the breast. They should be examined and inspected at stated and frequent intervals, and at the first evidence of recurrence, treatment resumed.

Postoperative radiation by radium can be employed with the same technic as in pre-radiation, treating each lesion as might be necessary.

CASES



CASE NO. 743. Results after preradiation by x-ray followed by amputation and postradiation.

Diagnosis: Carcinoma of breast with supraclavicular and axillary involvement.



CASE NO. 1729. Same as Case No. 743.



CASE NO. 1826. Inoperable carcinoma of breast, complicated by diabetes and exophthalmic goiter. Treated by pre-radiation, amputation and postradiation. Diabetic treatment instituted before amputation.

SUMMARY

1. From a study of the lymphatic supply of the breast and surrounding areas, surgery cannot be relied upon to remove all diseased tissue.

2. The action of radium and roentgen rays upon the diseased tissue is entirely different in the sublethal and lethal dose.

3. Preoperative radiation should always be employed and sufficient time permitted to elapse before surgical procedure is undertaken.

4. The cancer problem can no longer be viewed as a definite pathological entity belonging to the field of surgery alone, but it is equally important that the physicist, the

chemist, and the histologist each have his part to perform, and thorough co-operation would lead to better end results.

5. If more attention were paid to the individual typing of tumors, both prognosis and statistics would be more accurate.

REFERENCES

"Second Report upon Fractional High Voltage X-Radiation Technic in Certain Inoperable Malignant Lesions—Why Preferred to the Massive Dose Method," by Dr. William L. Clark, read before the American Electrotherapeutic Association at Chicago, September 15, 1925.

"Objections to the Use of Radium Emanation in Bare Tubes, with Clinical and Histological Observations," by Drs. William L. Clark, J. Douglas Morgan and E. J. Asnis, read before the American Radium Society at Chicago in June, 1924.

RESEARCH ON SURGICAL SUPPLIES

According to Dr. E. R. Weidlein, Director, Mellon Institute of Industrial Research, University of Pittsburgh, the firm of Johnson & Johnson, manufacturer of surgical supplies, New Brunswick, N. J., has established at the institute a fellowship that will study the exact requirements of surgeons and other medical specialists in the way of sundries, with the joint aim of developing new supplies that are needed and of standardizing the products now in use. An investigation will also be made of the processes of renovating used supplies, and several other industrial fellowships of the institute will co-operate in devising satisfactory procedures.

Dr. Frederic H. Slayton (M.D., Rush Medical

College) will be in direct charge of this comprehensive research. The fellowship will be operated in a totally unbiased and independent manner, in accordance with the Mellon Institute system, and all its investigations will be conducted primarily for the benefit of the public. It is the plan to report the results in appropriate periodicals as the various phases of the studies are concluded.

In carrying on this work, Dr. Slayton and the institute's executive staff invite the concurrence of all interested organizations. They are especially desirous of securing the close collaboration of hospital executives and of members of the medical profession.

PHYSIOTHERAPY*

Some Considerations of the Installation and Operation of this Branch of Therapy

P. W. FLAGGE, M.D., High Point

Although some more or less new methods, or procedures, have been introduced into the practice of physiotherapy within the past few years, this branch of therapeutics is not by any means new. Quite likely it was one of the first, if not the first, form of practical therapeutics. The prominence which it has gained today marks a return swing in the pendulum, which has been the fate of many other therapeutic measures.

The term *physiotherapy* as it is interpreted today is very flexible and inclusive, taking into consideration and all mechanical therapeutic measures. We find the following agents and measures considered under the discussion of the subject: x-ray, radium, hydrotherapy, massage, mechanotherapy, spinal manipulation, electrotherapy, and light and heat therapy. All of these agents have found, or are finding, their way into the well-organized institutions. Manifestly it will be impossible at all times for the general practitioner to acquire much of this apparatus, and he will have to content himself with such as appeal to him from personal preference or his ability to give the required time to their proper application.

Nothing in the paragraphs following is intended to discourage any one from entering upon any phase of the work that may appeal to him, but it is apparent that in its final application the practice as a whole will remain always an institutional procedure.

At this point it is well for us to consider the essential equipment required for a small institution. After a careful consideration, I am of the opinion that the following is the least that will meet the demands in a fairly complete manner. First, an x-ray outfit which need not be of the so-called deep therapy type, for there will be a hundred

calls for light therapy to one for deep therapy. Radium will be an asset, although one can do without it. Second, ultra-violet and infra-red light. We may, if we choose, include radiant light, but I think that the infra-red will take the place of it quite well. Third, a galvanic and sinusoidal machine. These currents are now obtained in one machine which takes the commercial current and changes it into the several modalities. Fourth, a standard high frequency cabinet with all three currents properly wound. For effective work there should be a portable cabinet, as there are times when we shall not want to move a patient from the bed.

If deep therapy is to be given it is conceded that this should be in the hands of one who gives this form of treatment special attention. In other cases the average physiotherapist will be able to handle the x-ray in connection with the other general work of the department. Light and electrotherapy present peculiar cases because they have been brought to the profession entirely through commercial agencies in such a way as to invoke the displeasure of the American Medical Association.

It is fortunate for the profession that these two forms of treatment have been handled in this way, for it has cut short the experimental stage in the hands of the profession and brought them to the patient several years earlier than they would have reached him had they been dependent upon the profession alone for development. It is also fortunate that these forms of treatment were taken by the manufacturer to the profession at large for evaluation, as in this way there has accumulated a volume of satisfactory evidence which gives confidence to their extensive use.

It is unfortunate that in so doing the antagonism of the conservative element in the profession was aroused. Now it appears that an amicable agreement has been reached be-

*Read before the Guilford County Medical Society June 3, 1926.

tween the manufacturers and the association, and the manufacturers are placing the sales on an ethical basis. This will give the profession the assurance to which they are entitled from the standpoint of ethics.

Like all other branches of therapeutics, physiotherapy has been and is under constant and severe critical observation and study. In some more or less complete manner, each modality, or procedure, has been tried out singly, and the exact effects carefully evaluated. This study has led to the combination of one or more modalities, frequently bringing results which singly were unattainable and paving the way not only for the combination of physiotherapeutic measures, but also for combinations of drug therapy and physiotherapy, of surgery and physiotherapy, or a combination of the three. This has been stimulating to each branch in research work, wholesome from the standpoint of fellowship, and has sealed the fate of at least two branches within the profession which at one time threatened to fall into the hands of the unscrupulous.

With the exception of the x-ray machine, all the apparatus should be installed in one room which is large, well ventilated, and light. In this room there should be two good tables constructed principally of wood, although one may be of the ordinary metal type if a good thick rubber sheet is at hand to be used for insulating purposes when necessary. One of the tables should be suited to vaginal and rectal work.

The personnel of this department is a matter of vital importance. In addition to knowing the apparatus from the standpoint of therapy, the physician should have a fairly good working knowledge of electricity in general. Even with the very best machinery handling electricity there will be necessary adjustments from time to time and it will save time and expense if the physician is able to make minor adjustments and to detect failure in the machine to deliver the proper element. He should also be able to make a careful examination of a patient in order to give the indicated treatment, and in an institution he should have the authority to change or modify treatment suggested by any other department. It is really better that patients be referred without specific instructions, although the physiotherapist should be

open to suggestions in special cases. Such arrangement will save much valuable energy, prevent the department being cluttered with cases in which there is little or no hope of successful treatment, while a re-survey of any case will be beneficial to all parties concerned. Under any circumstances any outside referred work should be carefully examined, prescribed for and treated on the merits of the case. The physician who refers such cases will thereby save himself embarrassment which he might easily incur by attempting to indicate a line of treatment because it is quite probable that the average man has not the time to familiarize himself with the details of this special work any more than he has time for the details of surgery or any other special work.

In general the same requirements should be demanded, although to a lesser extent, of the assistant or nurse. She should be a woman of quiet demeanor, patient in handling the cases and willing to go to any extreme in order to instill in the mind of the patient a feeling of confidence and mental repose when left to her care. Nothing will do more to wreck results than a shock, or fear induced by careless handling of electrodes, or indifference as to possible results under treatment. This assistant should be taught with care to detect defective technic and poor results. Since women in general have less mechanical ability than men, one can readily understand that the available applicants are limited in number; hence physicians in institutions should be ready to develop those who show special aptitude for the work.

What shall we treat? I shall dismiss this question with few remarks for the reason that we shall find more cases on the average that will respond to appropriate treatment than we shall have the time and apparatus for treating if we are not careful in our selection of cases.

One versed in physiotherapy, having the range of an ordinary small hospital, will find a large number of cases in which he may be able to help the internist or the surgeon. The only necessity here will be for co-operation. The decision of the head of the department should be as final as a decision of the internist or the surgeon. To give the patient some form of physiotherapy because you have decided that you want him to have physiotherapy is about as unreasonable as to decide

that you will remove the gall bladder because you want your patient to have some surgery. In debatable cases, the head of this department should have the last word, just as the surgeon or internist should have the last word in a case of surgery or the matter of internal medicine.

Physiotherapy takes the place as an aid to the internist with an ease and certainty of position that argues for a continuance of its relationship with this branch of the profession. Its field of usefulness to the neurologist has not been exhausted. Within the past year I heard a man connected with an institution for nervous and mental diseases make the remark that it was used with them for its psychical effect. I hope he is better versed in neurology than he is in physiotherapy.

The urologist finds his best ally in this form of treatment. In my opinion, since the introduction of practical cystoscopy there has not been introduced into the practice of urology such an effective agent as physiotherapy.

Finally, surgery claims it among its latest and best acquisitions. Leaving out of consideration the matter of removal of the many forms of superficial growths in which it is invaluable in the form of electro-coagulation, desiccation and fulguration, it has entered the field of major surgery. This form of surgical procedure has been found most useful in

malignancies where it is important to seal the lymphatics before removing the malignant mass. The surgeon should not forget that he has here an instrument which is adaptable to intra-abdominal as well as extra-abdominal work. The technician should be on hand in all major surgical operations to make adjustments of current. The actual control of the switch delivering the current to the field should be at the foot of the surgeon for his personal operation as the time necessary to give an order and to have it executed may make a difference between coagulation and cauterization, or fulguration.

A few words about the after-care of the ordinary medical cases treated in the course of out-patient work will not be amiss. If the best results are to be obtained it is imperative that ample provision be made for the patient to have a period of rest and relaxation after he leaves the treatment table. It is not fair to the patient or to the doctor to allow the former to leave the house immediately, to resume work, or to take the exposure of outside temperatures.

In conclusion, we would plead for a careful investigation of this form of therapeutics with the hope that the doctor as well as his patients will be generously rewarded for his effort.

THE ROLE OF IODINE IN THE TREATMENT OF GOITER*

W. H. SPRUNT, JR., M.D., Winston-Salem

The beginning of iodine therapy in goiter dates back to 1170 when Roger of Salerno used the ashes of seaweed in treatment of goiters. It was not realized that iodine was the causative factor until the time of Coindet who in 1820 found iodine in sea weed. In 1850 Chatin demonstrated that iodine would prevent the development of endemic goiter and cretinism. For a time following this, iodine was largely used. It remained for

Kocher to first call attention to the dangers attending the indiscriminate use of iodine. He warned against giving iodine to patients who had hard nodular meaty types of endemic goiter, which we today call adenoma without hyperthyroidism, because symptoms similar to Basedow's disease were apt to develop. This condition he termed "Jod Basedow," but showed that the etiology was different from true Basedow's disease. In 1895 Baumann showed that iodine was a normal constituent of the thyroid gland, and as early as 1907 Marine was teaching that the normal

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function of the thyroid was dependent on iodine.

In the prevention of goiter, iodine has long enjoyed a well deserved popularity. That iodine does not cause a normal thyroid to hyperfunction is shown by the fact that iodine has been used for years in the treatment of other conditions, with no effect on the thyroid.

Marine and Kimball have shown that iodine does no harm in reasonable amounts, and that, if given to children of school age, it will prevent endemic goiter. In their classic experiments on the school children of Akron, Ohio, iodine was given to 900 children, and a second 900 were not given iodine and used as controls. In the 900 receiving iodine over a period of four years only two developed enlargement of the thyroid, while in the 900 not receiving iodine 347 developed enlargement of the thyroid. These results have been duplicated on several occasions in districts where goiter is endemic. The amount given by Marine and Kimball in their series was two grams of sodium iodide over a period of two weeks twice a year. Since this work was done some towns in goitrous regions have adopted the policy of giving chocolate covered tablets containing ten milligrams of iodine once a week during the school year to children between the ages of 10 and 16. Other towns have added iodine to the water supply and still others have recommended the use of iodized salt. The logical way to give iodine in the prevention of goiter seems to be to give it only to children of school age and not to the entire population as in the method of adding iodine to the water supply, or of using the iodized salt. The reason for this is readily seen when it is remembered that in a region where goiter is endemic there are already many adults who have colloid goiters, some of whom have developed adenomata within the colloid, and these latter are apt to be made hyperthyroid by the use of iodine.

Marine's investigations further tend to show that the adolescent goiter in this country is almost invariably simple colloid, that is the first reaction of the thyroid to lack of iodine is a deposit of colloid in the acini of the gland. In many parts of Europe it has been shown that the usual type of adolescent goiter is the adenomatous type, so that

where iodine may be used with safety in this country in the early adolescent goiter, it must be used with caution where there is a chance that the colloid may contain adenomata.

The general experience in this country has been that the danger of giving iodine to patients under 20 years of age with colloid goiter is practically nil; while above 20 the danger of inducing a state of hyperthyroidism increases with age. This is due to the fact that where colloid persists adenomatous masses are almost sure to form.

One of the chief difficulties in interpreting the effect of iodine in goiter has been the failure to distinguish between the different types of goiter. The clinical classification used here as a basis for a discussion of the effects of iodine on goiter is that of Plummer, who divides diseases of the thyroid into nine distinct diseases:

1. Diffuse colloid goiter
2. Adenomatous goiter without hyperthyroidism
3. Adenomatous goiter with hyperthyroidism
4. Exophthalmic goiter
5. Myxedema
6. Cretinism
7. Childhood myxedema
8. Thyroiditis
9. Malignant diseases of the thyroid.

The first four of these are the only ones we are concerned with in this discussion.

1. Diffuse colloid goiter. This is a soft symmetrical enlargement of the thyroid due to the deposit of colloid in the acini, and unassociated with symptoms of hyperthyroidism. It is also known as the goiter of adolescence, simple goiter, and endemic goiter. This must not be confused with exophthalmic goiter, in which the gland is usually symmetrically enlarged, but in which there is a marked increase in the basal metabolic rate. In diffuse colloid goiter the basal metabolic rate may be below normal. In the treatment of this goiter iodine is very useful and if the patient is young a fairly prompt reduction in size may be expected. The form in which iodine is given is not of great importance, the important point being that it must not be given continuously for weeks or months without supervision. It is well to have some

definite plan of administration, such as to give iodine for a period of two weeks out of every month. During this time the patient should be seen about every two weeks. If the enlargement has been present for any length of time the colloid is very apt to contain masses of adenomatous tissue and iodine must be used cautiously. As a general rule it is safe to give iodine to these patients if they are under 20 years of age. After this it is best to use either thyroid extract or thyroxin. Surgery is rarely indicated in this type of goiter. In addition to iodine or thyroid extract it is advisable to clear up all foci of infection. In many cases the tonsils are infected and in others carious teeth seem to have some bearing on the etiology. Cases that have not responded well to iodine therapy have been known to clear up very promptly following removal of diseased tonsils.

2. Adenomatous goiter without hyperthyroidism. This is a nodular goiter which is clinically inactive, except possibly for pressure symptoms. It is also known as simple or non toxic goiter. This type of goiter usually occurs where there has been a previously existing colloid goiter, the adenomatous tissue appearing sometime between the ages of 20 and 30. In the typical case there is no question of the diagnosis as on palpation definite nodules can be felt. In many cases the nodules are masked by an excess of colloid.

This is the type of goiter in which iodine is contraindicated, as it has been repeatedly shown that the administration of iodine to a non-toxic adenoma will in all probability convert it into a toxic goiter, and also that the discontinuance of iodine will not cause a cessation of the toxic symptoms. In a recent paper Hartsock, of Crile's clinic, has called attention to the increase in toxic adenomata due to the widespread use of iodized salt. It was not realized at first that the extremely small amounts of iodine in iodized salt would activate a quiescent adenoma, but he has shown that small amounts continued over a long period of time will in many instances cause toxic symptoms, which are only relieved by a resection of the adenomatous mass.

The only treatment for adenoma is surgical, and this should be done before the adenomatous masses begin to degenerate and

produce symptoms of myocardial damage.

3. Adenomatous goiter with hyperthyroidism. This is a constitutional disease caused by an activation of a previously existing simple adenoma. On examination of the thyroid gland it is seen to be similar to the non toxic adenoma, but the constitutional symptoms are markedly different. There is an increase in the amount of thyroxin thrown into the system which causes an elevation of the basal metabolic rate, with the resulting secondary changes. Under other classifications this condition is known as toxic, thyrotoxic or hyperfunctioning goiter. It is the goiter that Kocher designated as Jod Basedow. Formerly this type was looked on as being an incomplete form of exophthalmic goiter. In 1912 Plummer showed this to be a separate entity, distinct from exophthalmic goiter. In his paper at that time he emphasized the fact that "if hyperplasia of the thyroid is of sufficient degree or extends over a sufficient period of time, exophthalmos is almost sure to develop. Also no matter how intense the intoxication from an adenomatous goiter not associated with hyperplasia, exophthalmos will not develop." In other words his conception of the difference between the two types is that in adenomatous goiter with hyperthyroidism there is an excess of normal thyroxin in the body, while in exophthalmic goiter there not only is an excess of normal thyroxin in the body but there is an abnormal thyroid secretion present.

The onset of an adenomatous goiter with hyperthyroidism is very insidious, the enlargement being noticed on an average of 18 years before the constitutional symptoms become marked enough to cause the patient to seek relief. In a typical case the goiter is first noticed at the age of puberty, but as it gives no symptoms nothing is done about it. Later the patient notes an increase in the appetite, a gradual loss of weight and strength, and an increasing nervousness, together with the other symptoms that go with a hyperfunctioning thyroid. On account of the nodular type of the gland the typical case is readily diagnosed but it must be remembered, that in approximately one-third of all exophthalmic goiters there is an associated adenomatous condition.

In the treatment of this condition, iodine, along with other medical measures has no

place, in fact if the condition is only mildly hyperthyroid, iodine may so stimulate the gland as to make it markedly hyperthyroid. Thyroidectomy is the only rational treatment for this condition.

4. Exophthalmic goiter. To quote Boothby, "Exophthalmic goiter is a constitutional disease apparently due to an excessive, probably abnormal secretion of an enlarged gland showing pathologically a diffuse parenchymatous hypertrophy and hyperplasia. It is characterized by an increase in the metabolic rate with the resulting secondary manifestations, by a peculiar nervous syndrome and usually exophthalmos, and with a tendency to gastro-intestinal crises of diarrhea and vomiting."

The onset of exophthalmic goiter is usually abrupt, and most cases are seen within six months to two years after the trouble commenced. This is so true that where exophthalmos is found in a goiter of long standing there is almost sure to be present an adenoma plus hyperplasia. The progress is usually in cycles, while in the toxic adenomas there is a gradual increase in the symptoms. The patient with exophthalmic goiter may have a crisis; then after the crisis is over apparently be perfectly normal, in early stages of the disease. Gastro-intestinal crises of diarrhea and vomiting are frequent in exophthalmic goiter and are lacking in adenomatous goiter. In the absence of a reliable basal metabolic rate, the neuasthenic with a small colloid goiter is frequently mistaken for an exophthalmic. This can be avoided at times only by careful attention to the history and physical examination. The quadriceps muscles are usually among the first to show signs of weakness and this fact is frequently made use of in differentiating exophthalmics from neurasthenics. The exophthalmic patient, when asked to step upon a chair is confident that he can do it easily and will either fail or almost fail, while the neurotic is sure that she will not be able to do it and yet does it quite easily.

The treatment of exophthalmic goiter is thyroidectomy, but in the preoperative preparation of these patients iodine is invaluable. Before Plummer showed that iodine would cause an abatement of the crises, it was customary to tide these patients over by means of rest, ice bags, etc., until they should be

over the crisis, and then in the bad cases to do a ligation or multiple ligations before attempting to remove the gland. Since the introduction of iodine in the form of Lugol's solution, it is not uncommon to see patients admitted during a crisis greatly improved in a few hours following large doses of iodine. These same patients as a rule will continue to improve on Lugol's for a period of ten days to three weeks. A few days after they have reached their maximum improvement thyroidectomy should be performed. Only very rarely is it necessary to do a ligation. The optimum dose of Lugol's for the average patient has been found to be ten minims three times a day well diluted in water. It is important to note that while Lugol's will cause a marked improvement in these patients the first time it is administered, they apparently establish a tolerance for it so that subsequent administration of iodine will not as a rule cause as marked an improvement as was noted the first time. The present experience is that iodine will not cure an exophthalmic goiter, and should only be used prior to operation. Every surgeon doing goiter work has had the experience of being called to see exophthalmic patients who have been given iodine on three or four occasions and who will no longer respond to it, and he is thus robbed of his best preoperative aid.

CONCLUSIONS

1. In the prevention of goiter iodine should be administered only to children. Iodized salt is impractical and may be harmful.
2. Before prescribing iodine for a patient with goiter be sure that no adenomata are present.
3. Iodine will cause an abatement of the crises of exophthalmic goiter but will not cure the disease.

REFERENCES

1. Thyroid and Thymus—Crotti.
2. The Thyroid Gland—Crile.
3. Functions of the normal and abnormal Thyroid Gland—H. S. Plummer.
4. Diagnosis and treatment of diseases of the Thyroid Gland—W. M. Boothby.
5. Induced Hyperthyroidism—O. P. Kimball.
6. Iodized salt in prevention of Goiter—C. L. Hartsock.
7. Prevention and treatment of simple goiter—O. P. Kimball.
8. Prophylaxis of Goiter in children—Exstein, A., and Feldman, O.
9. Etiology and prevention of simple goiter—Marine.

10. Iodine and Goiter—McGuire.
11. Iodine in treatment of Goiter—W. A. Plummer.
12. The use of Lugol's Solution in Exophthalmic Goiter—Guthrie.
13. The use of Seaweed in prevention and treat-

ment of Goiter—Turentine, J. W.

14. Endemic Goiter as a public health problem—Kimball.

15. Iodine in the prevention and treatment of Goiter—Boothby.

THE PRACTICAL APPLICATION OF RECENT ADVANCES IN PEDIATRICS*

MARION Y. KEITH, M.D., Greensboro.

During the last few years much has been learned regarding the feeding of infants. Complicated formulas of the past have been discarded as unnecessary and simple mixtures of milk and sugar have been substituted. It has been learned that the chief causes of difficulty in the feeding of infants are under-feeding and infection. If the baby is receiving a sufficient amount of suitable food and develops a gastro-intestinal upset or fails to gain in a normal manner, the condition will not be benefited by change of the formula, but the source of infection must be sought, found and remedied.

The infection in question may be in the gastro-intestinal tract or in some part of the body far removed.

In infants, the ears are the most common seat of infection; therefore our attention should be directed to the ears in every case. Abnormal changes in the ear drum can only be recognized by repeated examination of the normal. There are certain types in which the changes in the drums are very slight; so slight, indeed, as to be entirely overlooked by most otologists. The drum may be neither red nor bulging, but it has lost its luster and is of an opaque dull gray appearance. Often the diagnosis of otitis media must be made by exclusion rather than by the local signs of inflammation. The responsibility for the diagnosis rests with the pediatrician rather than with the otologist.

These patients show little or no prostration, no diarrhea; the patient vomits at times and is therefore not able to assimilate food;

the color of the skin becomes pasty and the patient will not gain in weight at a normal rate. Paracentesis of the ear drum results in free drainage of pus and the organisms recovered from culture in such cases are usually staphylococci.

Again we see cases in which there is a marked elevation of temperature, extreme prostration, much vomiting and profuse diarrhea and a rapid loss of weight. Examination of the ears reveals a red drum, slightly full or bulging or only with red streaks extending onto the drum from the canal wall. Paracentesis reveals usually thin pus and the organism recovered is a streptococcus hemolyticus. This is the type of ear infection which proves most serious, as the mastoids become involved and the course is often rapid and fatal. Again, we will see cases in which there is not sufficient opening in the drum and drainage is inadequate. There is a definite sag in the posterior superior canal wall just external to the drum membrane. This is the type in which sufficient drainage cannot be obtained through the drum, but must be otherwise provided. Drainage by the posterior auricular route has now become quite common in infants and the classical signs of redness, tenderness, and swelling around the mastoid region need not be present in order to make a diagnosis of mastoiditis.

Again, as a seat of infection, and especially in the presence of discharging ears, enlarged adenoids must be considered. All adenoids should be removed routinely from patients having chronically discharging ears. An examination of the urine should be made at frequent intervals in the presence of such infections, as the kidneys sooner or later be-

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come involved if the condition is permitted to continue for a considerable time.

In older children, too much emphasis cannot be laid upon the necessity of sinus investigation and properly directed care and treatment. Associated with this condition there are certain types of cases in which the symptoms point to a nose or paranasal infection, the condition simulates tuberculosis and a mistaken diagnosis of this disease is often made.

In these cases there is an enlargement of the post cervical lymph nodes. However, these patients do not show a positive von Pirquet or tuberculin test. X-ray examination reveals an involvement of the mediastinal and bronchial lymph nodes, a thickening of the hilus shadow and much mottling of the parenchyma throughout the lung.

We have mentioned urinary infections as secondary to foci of infection elsewhere. Now, it is my purpose to mention a few conditions in which the urinary tract is a primary seat of infection and it is in this group that we find the symptoms of high fever, vomiting, pain referred to the region of the urinary tract, chills, diarrhea, loss of weight and a waxy color of the skin. Pyelitis is usually due to an infection with the colon bacillus. This type of infection is rather self-limited as the condition decreases as the body is able to build up an immunity by the production of antibodies. Again, the condition may go on to multiple abscess formation in the kidney. In females pyelitis is often the cause of a long sought-for and unexplained temperature. The condition is quite common.

The treatment in such cases is to give urotropin in large doses (5 to 7 grains every four hours to an infant). In order to render the urine acid, calcium chloride or ammonium chloride in a dosage equal to that of urotropin is given. Frequent transfusions and glucose as a diuretic agent are quite beneficial.

There is still another type of pyelitis in which the symptoms date back to birth. Investigation shows that the urine contains persistently much pus. Staphylococcus, colon bacillus and many of the secondary infecting organisms may be found. Extensive treatment has been given, especially much sodium bicarbonate, but the condition persists. This type of case falls into the group of congenital abnormalities of the urinary tract. A defi-

nite diagnosis cannot be made upon the clinical symptoms, and cystoscopic and x-ray examination are necessary. These patients will show some defect of the urinary tract, such as an accessory kidney, enlarged dilated pelvis, dilated ureter, constricted ureter, or enlarged ureter with very thick wall. Sometimes a congenital defect such as diverticulum of the bladder is noted. The treatment of this type of case is purely surgical. Frequent transfusions of physiological salt and glucose solutions are beneficial in decreasing the operative risk. What has been said above concerning the nature of infection and its related symptoms and treatment outlined has been ideal in that it can be carried out in a hospital practice. In private practice, however, it is often necessary to give treatment directed to relieve certain symptoms. This procedure is justified provided the real causes of such symptoms are borne in mind and treatment is directed towards relieving them.

Two symptoms which are commonly associated with infection are fever and vomiting and it is my purpose to discuss these symptoms briefly with the idea of pointing out the harm which sometimes may result from certain forms of treatment.

If an infant or child vomits sufficiently he will lose gastric juice as well as food which he has taken. Gastric juice contains a considerable quantity of hydrochloric acid and a small amount of sodium chloride. Ordinarily the chloride from both sources is absorbed by the intestines and the tissues and blood do not lose chloride secreted into the stomach. If, however, the stomach content is vomited, the chloride is lost, and if vomiting is persistent, it will not be long before the body may lose as much as one-half of its entire store. Under such conditions there comes into play a protective mechanism which keeps normal the total salt and crystalloid content of the body and thus keeps normal its osmotic pressure. Secretion of chlorides by the urine ceases and there is a retention of bicarbonate which in a measure replaces the lost chloride. So, as a direct result of the vomiting, the bicarbonate content of the blood and tissues may for a time rise above the normal. Such infants have alkalosis and administration of sodium bicarbonate by mouth is exactly the thing which should not be done. It is well to emphasize this point

because it is quite a general practice to give sodium bicarbonate for vomiting to relieve acidosis, when vomiting in itself does not produce acidosis, but an alkalosis, and it is only in rare cases such as cyclic vomiting that severe acidosis is associated with marked vomiting. Since, however, not only hydrochloric acid is lost through vomiting, but also sodium chloride, the body can not maintain its normal salt concentration by substituting the bicarbonate for chloride and in any marked case of pyloric stenosis where vomiting is severe, we find not only a high sodium bicarbonate content of the blood, but also a high non-protein nitrogen. In such cases as these urea has been retained to a degree sufficient to retain a normal osmotic pressure of the blood serum. This retention does not mean a nephritis, although albumin and casts are found in the urine, as is the case when anhydremia exists. The type of case that usually shows changes mentioned is that of organic pyloric stenosis or intestinal obstruction, but identical changes are seen in cases of pyelitis and mastoiditis, i. e., any infection associated with vomiting and fever. The practical point to bear in mind is that one may expect, in the presence of marked vomiting, an alkalosis and signs and manifestations of tetany which may be severe enough to cause generalized convulsions. The diagnosis need not be made through extensive blood chemistry study, since the urine in such cases shows the characteristic absence of chlorides. It is noteworthy, however, that the urine in cases of alkalosis may be quite acid. The simplest test for chlorides in the urine is to add a few drops of silver nitrate after the urine has been acidified. A white precipitate is seen if chloride is present.

Treatment directed towards bringing about a restoration of the normal relation of such substances of the blood is simple and consists in giving a sufficient amount of salt solution intraperitoneally, subcutaneously or in a 3 per cent solution subcutaneously. When the chloride content of the blood is replaced in such a manner, the body excretes rapidly both the retained bicarbonate and non-protein nitrogen and this automatically lessens the danger of tetany from alkalosis.

Fever is another common symptom found with rapid respiration. It is not unusual in the presence of fever to have breathing

which resembles that seen in severe acidosis. The blood of such patients reveals most commonly an alkalosis. The explanation is simple. Fever causes an increased respiration, which in turn causes a washing out of too much carbon dioxide from the blood. The ratio of free carbonic acid to sodium bicarbonate becomes altered and the reaction of the blood shifts to the alkaline side. The practical application of this knowledge lies in the fact that one should not be misled by simple hyperpnea in making a diagnosis of acidosis, particularly if fever is present, without confirming the diagnosis by urine examination. Usually the urine is alkaline to brom cresol purple (i. e., turns purple), in fever, but never so in the presence of acidosis except when the latter is associated with marked renal impairment.

We have seen that soda is directly contraindicated in the treatment of vomiting. However, soda is of value and is widely used in the treatment of pyelitis. One would naturally suspect, however, that soda would be harmful when given to patients with pyelitis when vomiting, and this is true and there exists still another reason why sodium bicarbonate in large doses should not be given in pyelitis, as alkalosis develops or follows.

However, there is one point which has been of particular interest concerning pyelitis, and that is the frequent high alkali tolerance which some patients show. These patients may require very large doses of soda before the urine becomes alkaline and it is particularly in such cases as these that convulsions may occur, due to large administrations of soda. One reason for the high tolerance is that mentioned above, when vomiting has been a pronounced symptom. Chlorides are lost, the total salt concentration of the body falls below its normal level. When sodium bicarbonate is given it is retained in the body until normal salt concentration is reached. This may result in marked alkalosis with convulsions. The practical point to be remembered in such cases is that when ordinary doses of sodium bicarbonate have been given and the urine does not become alkaline, the administration of sodium chloride will cause the excretion of sodium bicarbonate to such an extent as to make the urine alkaline and by doing so alkalosis is avoided. Another reason why cases of pyelitis will not

put out sodium bicarbonate in the urine although very large doses have been given by mouth is that there is associated a nephritis in which there is an inability to secrete normally take out the sodium bicarbonate, and therefore there is a retention of the alkali.

SUMMARY

1. The ears are a frequent focus of infection during infancy. Mastoid infection is also common and in these cases the classical signs of mastoiditis are often lacking. The diagnosis has to be made on the basis of the general symptoms rather than local manifestations.

2. In older children infection of the nasal accessory sinuses is common and often unrecognized. The symptoms are often mistaken for those of tuberculosis.

3. Persistent pyuria may be the result of foci of infection outside the urinary tract, or may be due to a congenital malformation. This latter condition can be diagnosed only by cystoscopy.

4. Alkalosis is a fairly common condition. It occurs regularly in the presence of vomiting. In such cases the administration of sodium bicarbonate is fraught with danger.

THE DIAGNOSIS AND TREATMENT OF SOME NEURASTHENIFORM SYNDROMES*

TOM A. WILLIAMS, M.B., C.M., Washington, D. C., and Miami, Fla.

Formerly Visiting Neurologist to Gallinger Hospital, Washington, D. C.; Corresp. Memb. Neurological Soc. of Paris; Corresp. Memb. National Academy of Medicine of Rio de Janeiro, etc.

NO IDIOPATHIC NEURASTHENIA

There are still some who believe in an essential neurasthenia; that is to say a condition of chronic or intermittent insufficiency of the functions of the nervous system expressed by fatigue, without other explanation.

Since learning to look for extraneous causes and especially since gaining an understanding of the mechanism of psychogenesis, and since the due considering of endocrinal disharmonies and latent infections, I have never had occasion to write neurasthenia as a diagnosis.

ADRENAL INADEQUACY

One of the most frequent of neurastheniform syndromes is that found in men who have subjected themselves to constant intense mental stress in which the affectivity has been insistently called upon, such as by the anxieties of business or professional life, or by domestic worries, sometimes after severe or prolonged infections, or by constant stimulation, as by zanthin bodies, tea and coffee,

and meat juices, as well as after medication by arsenic, mercury, opiates or strychnine.

Stress of this kind entails heavy demands upon the adrenals. Cannon, Crile and others have shown experimentally that in acute stress the adrenal vein contains enormous increase of adrenalin. The simplicity of this experiment contrasts with the extreme complexity of the clinical induction. This still remains unsatisfactory to many physicians, mainly because of their belief that adrenalin is decomposed when taken into the stomach. Despite this theoretical objection I have recorded scores of instances in which dried adrenal gland by mouth has seemingly restored to health men in a profound state of physical depression, languor and incapacity to concentrate for long, with loss of the power of decision, of ambition, low blood pressure, subnormal temperature, partial impotence.

Objectors may have failed to realize that adrenal substance contains a depressor element also, which usually causes the blood pressure to fall when only small doses are given,

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In my paper before the American Medical Association presenting these syndromes (Journal A. M. A., 1913, Nov.) there are several instances in which there was failure to respond to treatment until the initial dose of 4 grs. of adrenal substance per day was doubled or trebled, after which the blood pressure rose and the patient became subjectively and permanently well, finally being able to dispense with the opotherapy entirely.

That hypotension neurasthenia seems to be relatively common in warm relaxing climates like that of the southeastern United States I infer from having made such a diagnosis in a case of a man of extensive responsible interests in Savannah, Ga., to whom I was called by his physician some ten years ago. After the consultation, my colleague declared that there were at least fifty cases under his care showing a similar syndrome which he had been treating with little effect by the measures usual at that date; viz, so-called tonics, of which strychnine was the chief, when the patients were depressed; and when the patients became agitated because of their failure to respond to responsibilities without distress, they were given depressants like bromides and even hypnotics. All the so-called remedies only aggravated their condition, until sometimes abstention from work and rest in bed was imposed, which in many cases permitted jaded organs to recuperate and the patient would go on for some months, until stresses physical or mental would induce a relapse. The patient referred to recovered completely.

DIAGNOSIS FROM MYOCARASTHENIA

This syndrome of adrenal inadequacy has to be distinguished from the asthenia of myocardial insufficiency. This is done by the current procedures of clinical medicine, of which for this purpose the quantitative tests of cardiac response are the most important with the exception of that of holding the breath, which gives only indirect information dependent upon metabolic and especially oxidative factors. In the hypoadrenal patient, although the heart beat is weak, it is not unduly increased in rate or altered in rhythm, by the sudden demands made in the usual tests for cardiac efficiency.

PSYCHASTHENIA NOT TO BE LIGHTLY DIAGNOSED

The indecision of these patients has often led to the error of mistaking them for psychasthenics; that is to say, patients exhibiting the scrupulous syndrome, with its obsessions, phobias, tics, ruminations and anxieties. To this error is one most prone when on account of his failing powers the patient concludes that he must be losing his mind or potency or both. The anxiety engendered by this belief may put on the wrong track the clinician who is not well acquainted with the natural history of psychoneuroses, for a single symptom does not constitute a syndrome.

HYPOPIUITARY INADEQUACY

Another neurastheniform syndrome from endocrinal disturbance is seen chiefly in young women because of insufficiency of the pituitary gland. A low grade of physical and mental activity with lack of ambition, torpidity, greediness and low moral development characterizes many of these patients.

Among the physical signs are small bones, scanty hair, adiposity, incomplete menstruation, high sugar tolerance, small pulse with low blood pressure. These patients can be restored to efficiency by proper dosage with pituitary substance. In this brief sketch the various pituitary syndromes cannot be particularized. Let an illustration suffice:

A girl of 15 was referred to me in Miami this spring because of progressive asthenia which was characterized by paroxysms of extreme lassitude, usually late in the day.

Examination showed the characteristic girdle adiposity, weight 169½, pulse 100, due to thyroid over-activity believed to be a compensatory reaction to offset the insufficiency of pituitary secretion. It had produced slight widening of the eyeslits and increased corneal moisture along with sudoresis and neck flush; but only slight tremor and no wasting. The blood pressure was elevated to 130/90, probably a compensatory adrenal response. The skin and mucous membranes were unduly pale.

In spite of this the child was given not only pituitary gland but a small dose of thyroid, and also iodide and iron. The result has been steady decrease of weight and intermission of the spells of faintness, greatly increased alertness and energy and improve-

ment in color. The weight having decreased in five weeks to 159½.

OTHER ENDOCRIN TYPES

Even more neurasthenic are the patients in whom adiposity does not occur. This type is usually tall with spindly legs and arms, and the extra fat is deposited only around the great trochanter. They are often thyroids and fatigue easily.

Acromegalic neurasthenia is very distressing, disturbed by fleeting pains and inadequacies as so clearly described in *Dr. Mark's Autobiography*.

In contrast with these endocrine types is the pseudo neurasthenia of an inactive thyroid patient in whom inertia may be mistaken for fatigue, a symptom which does not occur unless complications arise.

However, in hyperthyroid patients periodic fatigue is very common, in consequence of bursts of excessive energy which exhaust them.

METABOLIC ASTHENIAS

Besides the above disturbance of body chemistry there is an even commoner one which produces a neurasthenic state, characterized by heaviness, dragging sense of fatigue on exertion, disinclination for cerebral activity, slackening of ambition and a feeling of discouragement and perhaps pessimism. Irritability occurs in some cases and self depreciation in others. This state is well known in its acute form after a debauch. From this we may infer that it is a toxicosis, but autochthonous. I believe it to be due to an overloading of the body cells with pabulum, or to put it differently, an inadequate oxidation in the cell protoplasm; for the symptoms disappear when oxygen is given, and when the patient breathes deeply or actively exercises. Starvation, especially of proteins, too, will remove the symptoms. Psychological stimuli may do so, especially a sudden emergency.

DIFFERENTIA FROM CYCLOTHYMIC DEPRESSION

In many respects this neurastheniform state resembles the melancholic phase of cyclothymia with its sluggishness and its retardation of thought, although in the latter the disturbance is so profound that the patient does not respond readily to treatment, is so distressed that suicide is a great danger,

and in consequence may have to be in custody.

DEMENTIA PRECOX

The earlier manifestations of dementia precox are unfortunately too often treated lightly as a neurasthenia. Only a careful psychological study of the patient will prevent this error. Furthermore it is impossible to predicate the upshot of schizophrenic reactions when discovered early, for a number of cases have been referred me for diagnosis presenting a clinical picture highly typical of dementia precox, in whom proper psychological management has prevented further morbid developments and restored the patients to health without relapse. For instance:

A girl from St. Louis was referred by her cousin, a physician, fourteen years ago, presenting numerous mannerisms of thought and behavior, attitudes, grimaces, flighty conduct, sexual preoccupations, contumacy, emotional outbursts of laughter and tears. A psychological study traced this behavior to scruples and doubts regarding social and moral relations and her future. Re-education resolved these difficulties and the girl continued at college taking high honors, later gaining professorships and living a happy fruitful life.

PSYCHOGENETIC ASTHENIA

Lastly we cannot leave unconsidered an often overlooked, though quite frequent neurastheniform syndrome which has no physical substratum. Neither structural nor clinical agencies play any part; and heredity, that refuge of the lazy minded, cannot be incriminated.

Its source is dynamic, usually termed psychogenetic. We shall understand it better through a physiological illustration, viz., the intense fatigue producible by a continuous loud noise over several hours; a fatigue not of the auditory apparatus alone but of the whole organism, where a dynamic stimulus produces a draining of energy.

A simple clinical example is that of the young child, or that of the grown up spoilt child, who when faced with an unpleasant or arduous task complains of fatigue, a state which is more than a mere attitude of mind, for it expresses itself in pallor of the face, slowing of the pulse and a sagging of all the tissues as well as loss of appetite and muscular asthenia.

Now, this is the state of many neurasthenic adults, some of whom go through life thus; as the means of its removal are never secured by them. The best that can happen to a patient in this condition is that he or she be sent to a discerning neurologist capable of differentiating the psychogenetic factor and then of dealing with it intelligently. That is done by penetrating to its foundations, and then teaching the patient these and showing her the means of shaking off the incubus,

substituting for morbid mental attitudes and a wrong view of herself and the world, a healthy mental attitude and a sane view of circumstances. The details of this cannot be particularized in this short paper, but have been published.

See "Psychotherapy Genuine and Spurious;" Address Chicago Medical Society at opening of the new building, 1914. *Ill. Med. Jour.*

"The Mechanism of the Psychoneuroses." *Amer. Jour. Psychiatry*, 1905.

314 Exchange Bldg., Miami, Fla.

SURGICAL TREATMENT OF ANGINA PECTORIS*

C. C. COLEMAN, M.D., AND J. G. LYERLY, M.D., Richmond

From the Department of Neurological Surgery of the Medical College of Virginia

There has been accumulated enough experience within the past ten years to justify the opinion that angina pectoris should be considered a disease which at times may require surgery for relief of pain. Operation for the relief of pain in angina pectoris probably has little effect upon the pathology which produces the pain. Admission of this fact, however, should in no way be used as an argument against operation in properly selected cases. There are certain well established procedures in surgery which have for their sole object the relief of pain; among these may be mentioned operations upon the ganglion for tic douloureux, section of the pain tracts of the spinal cord for intractable pain due to malignancy of the lower cord or the main nerve trunks, and section or injection of the superior laryngeal nerve in tuberculous laryngitis. In none of these conditions is the pathology benefited by the surgical procedure, yet the value of operation is generally recognized.

The agonizing pain of angina pectoris is sufficiently familiar to all and needs no discussion, nor shall we attempt to argue the causes of angina pectoris—whether the disease be due to aortitis as believed by Allbutt, to cardiac exhaustion or to thrombosis of the

coronary arteries. A discussion of these theories is not the purpose of this paper. It is true, however, that severe angina pectoris may exist with only slight manifestation of cardiac or vascular disease. It is generally believed that the pathways for pain conduction in the disease lie through the sympathetic nervous system, and with this in mind, Franck in 1899 first suggested that the pain of angina might be relieved by operation upon the cervical sympathetic. It seems that 17 years elapsed before Jonnesco, following Franck's suggestion, removed the cervical sympathetics for relief of the painful attacks. Jonnesco removed the whole cervical sympathetic chain with its three ganglia and the first dorsal ganglion on the left side. American surgeons have been somewhat divided on the method of operation. Reid appears to favor the extensive operation which removes all three of the cervical and first dorsal ganglia on the left side, while Brown, Miller and Kerr are content to remove only the superior cervical ganglion and its connections. As a substitute for the removal of the ganglia, Hofer divided the depressor nerve, which he considers the chief afferent pathway from the heart and aorta. The objection to Hofer's procedure is that this nerve is very inconsistent in man, and is not always demonstrated at operation. Moreover, the depressor nerve generally has connection with the superior

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cervical ganglion, and in the removal of this ganglion its afferent pathway is likely to be divided.

Much thought should be given to the surgical aspects of the treatment by both the internist and the surgeon. The indications for operation should receive serious consideration. There has been a proper hesitation on the part of the internist to subject a patient with such a severe disease as angina pectoris to any surgical procedure, but the slighter operation for removal of the superior and middle ganglia with the intervening connections has been shown to give as great a measure of relief as the operation which removes all three cervical and the first dorsal. The superior and middle cervical ganglia may be removed under local anesthesia with negligible risk to the patient. The undesirable by-products of the operations, such as contraction of the pupil and enophthalmos, have not been seriously objected to by our patients. If on the other hand the inferior cervical and first dorsal ganglia are removed, certain objectionable sensory disturbances have been felt in the left arm. It has been suggested by some that the pain of angina may initiate a fatal spasm of the heart. If this view is correct it might be that relief of pain would tend to prolong the patient's life. We have not regarded the danger of the operation as being so serious as one severe attack of angina. In formulating tentatively the indications for operation we believe that any severe case of angina which is not promptly relieved by the usual medication and rest and which has no advanced cardiac pathology, should have the superior and middle cervical ganglia of the left side removed.

The argument has been made by some that the pain of angina is a useful signal of danger, and that if the pain is relieved the patient is likely to disregard the advice of his physician as to exercise and other activities. We feel that life is worth very little to the victim of angina pectoris who is harassed by the apprehension of repeated attacks, and moreover, we have found in a limited experience that the patients who have been relieved of pain are as careful about their mode of living as those with recurring paroxysms. We have not been satisfied to remove the superior cervical ganglion alone,

but in three cases we have removed the superior and middle cervical ganglia with their cardiac connections. Two of the cases were done entirely under local anesthesia while in the third the novocain was reinforced by ethylene when the sympathetic chain was being isolated.

We prefer an incision parallel to and just anterior to the posterior border of the sternomastoid. This incision is about six inches in length. The sternomastoid along with the neurovascular bundle containing the carotid artery, internal jugular vein and vagus nerve, is pulled forward exposing the sympathetic trunk which is found on the longus capitis muscle, lying mesial and posterior to the vagus, and passing up into the large superior ganglion which lies on a level with the second cervical transverse process. Because of its spider-like appearance, there has been no particular difficulty in identifying the ganglion. Mistakes are reported in the literature where the vagus had been divided instead of the sympathetic chain. In one patient dissection of the sympathetic chain below the middle ganglion brought on the typical anginoid pain in the left arm. Immediate contraction of the pupil and narrowing of the palpebral fissure on the left side followed in every case, and we should be inclined to doubt the removal of the ganglion if the pupil of the homolateral side is not smaller than its fellow. The three patients made prompt recovery from operation.

The following summary of the cases is herewith reported:

Case 1. M. W. P., male, physician, referred to Johnston-Willis Hospital by Drs. W. T. Vaughan and J. H. Smith, of Richmond, on March 3, 1925. The patient had been suffering from recurring attacks of angina pectoris since December, 1924. Nitrites and other drugs no longer gave complete relief and he was completely disabled at time of operation. All examinations were negative for serious cardiac damage. On March 6, 1925, under local and a little ethylene anesthesia, the left superior and middle cervical sympathetic ganglia were removed through an incision anterior to the sternomastoid muscle. A small pupil and enophthalmos on the left were noted immediately after the patient recovered from the anesthetic. The patient made a good recovery from the oper-

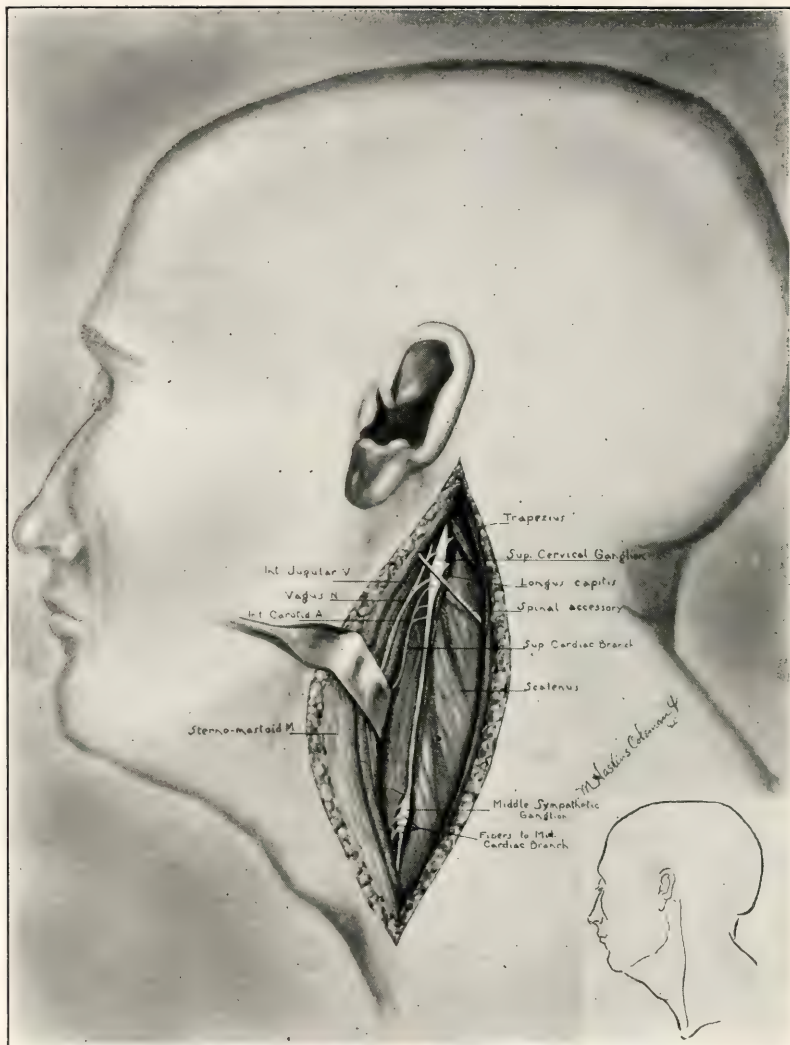


Figure 1—Insert shows line of incision anterior to and parallel with the posterior border of the sternomastoid. The second cervical nerve is blocked where it turns forward over the posterior border of the sternomastoid and the line of incision infiltrated with novocain and adrenal-in. The posterior border of the muscle is usually first exposed in the upper portion of the supra-clavicular fossa where the identification is easier. A much shorter incision may be employed where the superior ganglion alone can be removed and in such cases it is simpler to make the incision anterior to the muscle.

In the large drawing the spinal accessory nerve (which is at a lower level than shown) stretches across the field of incision. It is not necessary to sacrifice this nerve. An approach posterior to the sternomastoid seems preferable if both the superior and middle ganglia are to be removed. The sympathetic chain in some cases adheres to the longus capitis and the other deep muscles. In other cases it follows the neurovascular bundle. Because of the possibility of injuring important structures with which it is in close relation, avulsion of the superior cervical ganglion has not been done in any case.

ation. Extracts from a letter dated February 14, 1926, written by the patient, will summarize the results of the operation. "As a patient and a physician, I do not think I could have survived the almost continual and intense agony that preceded the sympathectomy. . . . Since then upon exertion I have noticed a fullness about the throat which disappeared very quickly. I do not hesitate to advise the operation for anyone with angina pectoris."



Figure 2 (Case 2)—Photograph of fresh specimen of left sympathetic chain, including the superior and middle cervical ganglia. The stumps of the superior cardiac branches are shown on the left of the upper ganglion and the stump of the middle cardiac branch appears on the left of the middle ganglion.

Case 2. M. I. D., male, aged 51, referred to Johnston-Willis Hospital by Dr. J. M. Hutcheson, Richmond, on April 20, 1925. Attacks of sharp, shooting pains through the

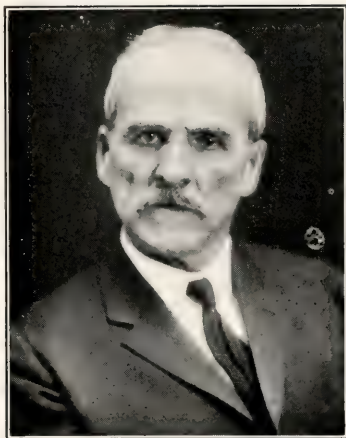


Figure 3 (Case 2)—Photograph made about one year after operation for removal of left superior and middle ganglia for the relief of the pain of angina pectoris. The slight enophthalmos and narrowing of the left palpebral fissure is shown. The changes in the eye are usually inconspicuous.

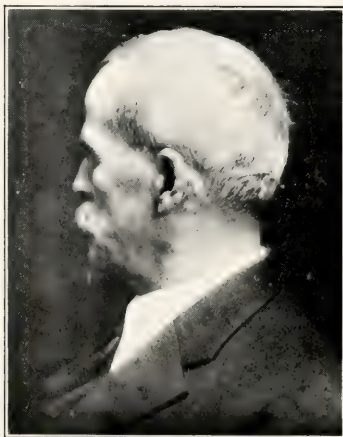


Figure 4 (Case 2)—Lateral view to show scar of operation.

left side of his chest and shortness of breath on exertion had been his complaints for three and one-half years. The pain had become worse, was not completely relieved by drugs and it was interfering with his occupation. The examination was negative except for a

slightly enlarged heart and aorta. On April 21, 1925, through an incision posterior to the sternomastoid muscle, the left superior and middle cervical ganglia and intervening trunk were removed under local anesthesia. A myosis and enophthalmos on the left were noticed immediately on resection of the ganglia. Recovery from the operation was excellent. He had a few mild anginoid pains for the first three days following the operation, but since then there has been no recurrence. He has returned to his former work.

Case 3. R. H. C., male, aged 61, referred by Dr. Manfred Call, Richmond, and admitted to Stuart Circle Hospital on June 15, 1925. The patient had suffered with gall bladder infection and cardiac disease for two years. His first attack of pain was in December, 1924, when morphine was required to relieve the pain. Previous to operation the pain had been bilateral and almost continuous for several weeks. Nitrites and morphine did not give entire relief. Examination at time of operation showed a low blood pressure—94/62—a systolic murmur at the apex, but no signs of decompensation. On June 30, 1925, through an incision posterior to the sternomastoid, the left superior and middle cervical ganglia and intervening trunk on the left side were removed under local anesthesia. The usual myosis and enophthalmos on the left side were noted immediately after the sympathectomy. The patient recovered satisfactorily from the operation. The pain which had been bilateral was partially relieved. Operation on the right side was advised but the patient wished to return home. He died seven weeks following the operation, of cardiac disease. His physician said the patient felt that his life had been prolonged and made more comfortable by the operation.

CONCLUSIONS

1. The pain of angina pectoris has been satisfactorily relieved by resection of the superior and middle cervical sympathetic ganglia and their cardiac connections.
2. The removal of the cervical sympathetics should be considered in every case of severe angina with recurring paroxysms of pain, provided the patient is free from serious cardiac disease.
3. The bilateral distribution of the pain will frequently call for removal of the two

upper cervical sympathetic ganglia and their cardiac connections on both sides.

4. The operation may usually be done under local anesthesia and is practically free from danger, in experienced hands.

5. The proper selection of cases for operation may be made only by the careful study of the patient by a competent internist. It necessarily follows that there should be the closest co-operation between the surgeon and the internist.

REFERENCES

- Allbutt, Clifford: *Lancet* 1; 883-885; 1925.
 Brown, P. K., and Coffey, W. B.: *Arch. Int. Med.*; 34; 417-445; Oct., 1924.
 Reid, Mont. R., and Andrus, DeW.: *Annals Surg.* 81; 591-604, 1925.
 Reid, Mont. R., and Eckstein, G.: *J. A. M. A.* 83; 114-117, 1924.
 Coffey, W. B., and Brown, P. K.: *Arch. Int. Med.*; 31; 200-220; 1923.
 Kerr, H. H., *Annals Surg.* 82; 354-362; Sept., 1925.
 Lienthal, Howard: *Arch. Surg.* 10; 531-543; 1925.
 Mackenzie, James: *Lancet*, 2; 695-697; 1924.

DISCUSSION

Dr. J. M. Hutcheson, Richmond:

The possibility of the relief of the pain of angina is bound to interest us all. I think we should look upon angina as a symptom frequently accompanying chronic myocardial changes, in many instances the result of aortic disease. In a considerable number of cases the pathology can not be determined. That sympathectomy does give relief to pain is an established fact, but, in my judgment, the cases in which this method of relief is indicated are extremely few. I have seen only one instance in a considerable series of angina patients in which I thought the procedure justifiable. In selecting cases for operation one has to consider the degree of pain and disability, together with the condition of the heart. When the pain is intolerable and not relieved by ordinary measures, and there is reason to believe that coronary obstruction has not occurred, operation is indicated.

It must be remembered that sympathectomy is done only for the relief of pain, and that it can not influence pathological changes already present in the heart. The idea that angina originates in the sympathetic, and that the spasm or stimulation or whatever occurs in the sympathetic is apt to bring

about serious results in the heart, it seems to me is carrying the thing entirely too far. A number of cases that have been reported as having been subjected to sympathectomy died promptly from coronary thrombosis.

Dr. William Allan, Charlotte:

I think this is a very interesting development in the treatment of angina, and undoubtedly it will relieve the pain in some very severe cases. I think there is a joker, though, in the statement that "sympathectomy is applicable in any case of angina that does not have advanced cardiac pathology." In the first place, who can tell, before the autopsy, that any case has not advanced cardiac pathology? I think no one can. In the second place, cases apt to have the severest pain are those with advanced cardiac pathology.

I think pain is a very valuable thing in certain cases of angina, particularly those in which the angina is invariably produced by exertion. If you take pain away from those people, they will probably break down much more quickly. I do not think that type of angina should be relieved by abolishing the pain, but by making them live below the

level of the pain. The idea that the pain in angina is caused by spasm I do not take much stock in. It seems more likely that the pain in angina is due to anemia of the heart muscle.

Dr. Lyerly has had very good success with his cases, and in a limited number of cases I think it will be a fine thing, but I think he is going to have to operate on some advanced cardiac pathology if he is going to relieve some of his worst pain cases.

Dr. Lyerly, closing:

In regard to those cases with advanced cardiac pathology, I admit we can not tell just what the cardiac disease is in the living patient, but if the patient has signs of cardiac failure I doubt whether we should operate. At least we should hesitate, for not only may the operation be an added danger to the patient, but, at the same time, it may tend to bring the operation into disrepute among those who need it. Of course, the pain in angina, which we try to relieve, probably has not any effect on the cardiac disease. The point which we should keep in mind is that it is solely the pain which we attempt to relieve.

ACUTE NON-DIPHTHERITIC LARYNGITIS IN CHILDREN*

Report of Cases

C. N. PEELER, M.D., Charlotte

Before discussing infection of the larynx in children, I wish first to speak briefly of the anatomy. In infancy and childhood the larynx is proportionately smaller than in adults. It is also small in proportion to the development of other parts of the body. The cartilages are softer and more yielding. The mucous membrane is not so closely adherent to the underlying tissues, consequently edema takes place more easily—the lymphatic supply is richer,—therefore, acute laryngitis is more likely to be attended with greater swelling of the parts. The nervous system of a

child is, also, more unstable than in the adult, and especially is this true when the larynx is involved.¹

In consequence of these peculiarities, an infection of the child is a much more serious condition than in later life, often producing alarming symptoms—dyspnea, cyanosis, etc., in a very short time.

The principal causes of acute laryngo-tracheo-bronchitis are diphtheria (Klebs-Loeffler) bacilli, streptococci and staphylococci. There are numerous other bacterial causes, but these are the most frequent and the most dangerous. Inflammation or edema of the larynx is also caused by inhalation of

*Read before the Seventh District Medical Society at Shelby, October 12, 1926.

steam or hot water, by chemicals, or by foreign bodies.

In every case I have seen and in the six cases reported later, the child had diseased tonsils and adenoids, which acted, I feel sure, as a decided predisposing cause and provided a fertile field for the growth of the infecting organisms.

The child usually begins with a cold more or less severe. On examination, there is some acute inflammation of the tonsils and pharynx. The laryngeal mucous membrane is inflamed. There may be a thin grey membrane present or only redness and swelling showing in the larynx and trachea.

The ary-epiglottic folds may be swollen. Usually the false cords are inflamed and swollen. The true cords are the most resistant to infection. The subglottic tissues are easily affected. There may or may not be an extension of the inflammation down the trachea and bronchi. When this condition is present, there are always more or less dyspnea and cyanosis along with fast pulse and increased respiration. This picture may be easily mistaken for laryngeal diphtheria, unless it is possible to have a direct laryngeal examination and a culture and smear taken from the larynx. Where this is not available I think it wise to give one large dose of antitoxin even though we are not sure the case is that of the Klebs-Loeffler infection. In the absence of diphtheria, no harm will result from the infection when properly given and in the event of its presence valuable time will have been saved.

Case 1: S. C., white, age 23 months. Referred by Dr. M. for tracheotomy.

Two weeks before the child had what was diagnosed as laryngeal diphtheria. Antitoxin was given, but an intubation was necessary. On the fourth day the tube was removed and after sixteen hours it was necessary to reintroduce it on account of difficult breathing. One week following this the tube was removed a second time, but had to be replaced again in two hours.

After entering the hospital the intubation tube was removed and difficult breathing immediately followed. A tracheotomy was performed. During the operation a perilaryngeal abscess was drained. Streptococci were present in the abscess and, also, in the culture from the larynx.

On admission, the child's temperature was 101.2, pulse and respiration increased, white count 16,000, urine showed a trace of albumin. There was some swelling on the front and right side of the neck, also some difficulty in swallowing.

After the tracheotomy the child immediately improved and made an uneventful recovery.

Case 2: W. C., white, age 10 months.

The child had cough and difficulty in breathing for the past four days. Mother thought the trouble began with a supposed foreign body. She took a piece of bark from the child's mouth. Antitoxin had been given for the difficult breathing.

Examination reveals a sick baby with marked hoarseness and considerable dyspnea. Chest examination very difficult on account of restlessness and crying. X-ray negative for foreign body. Throat and tonsils acutely inflamed, mucous membrane of larynx and trachea much swollen, vocal cords thickened and swollen. No foreign body seen on bronchoscopic examination. Tracheotomy performed. The condition of the child was much better following operation.

Culture from throat showed hemolytic streptococci.

The child's improvement has been slow but uneventful. Suction had to be used frequently to cleanse trachea and bronchi of secretion. The child is still wearing the tube, but will be ready to discontinue it soon.

Case 3: J. A., white, age 15 months. Referred by Dr. B. S. M. on account of difficult breathing for the past three weeks.

Examination revealed a well-nourished child. Respirations twenty per minute. There is a loud crowing noise at both inspiration and expiration, inspiratory being the louder. The tonsils, pharynx and uvula are inflamed. Direct examination of larynx shows mucous membrane and vocal cords inflamed and swollen, no membrane present anywhere. Smear and culture show streptococcus as the predominating organism. X-ray of chest negative for foreign body. Treatment to throat and larynx did not relieve the condition. After four days a tracheotomy was performed which greatly improved the child's respiration. A large amount of pus was expelled from the trachea and bronchi.

Sometimes suction was used as often as every hour.

On the 15th day in the hospital, the condition suddenly became worse and the child died.

Bronchoscopic examination showed the lumina of both bronchi closed by inflammation and swelling of mucous membrane.

Case 4: L. M., white, age 10 months. Referred by Dr. T. on account of difficult breathing.

Had taken no nourishment for past three days.

Examination showed well-nourished child that looks sick and toxic. Temperature 104, pulse 160, respirations 40. Difficult breathing, but no cyanosis. The mouth, gums, tonsils and pharynx acutely inflamed. Mucous membrane of arytenoids inflamed and swollen. Vocal cords in fairly good condition. Chest examined by a pediatrician reveals some rales at root of right lung, but no consolidation. Smear and culture from throat show streptococci and pneumococci in large numbers.

The child continued very sick, but on the eighth day a large suppurative gland in the midline beneath the chin was opened. A considerable quantity of pus was evacuated. The general condition improved and the dyspnea rapidly subsided.

The child was dismissed from the hospital four days later, but still runs some temperature intermittently. This, I think, is due to diseased tonsils and adenoids.

Case 5: P. C., white, age 3 years. Referred by Dr. G. on account of dyspnea.

Dyspnea had been present for three weeks. Has a hoarse croupy cough and slight temperature. The tonsils were enlarged, inflamed and covered with dirty grey mucoid material. Post-nasal space has same general appearance. Arytenoids and epiglottis show inflammation and congestion. Mucous membrane of the larynx somewhat inflamed. Cultures show streptococci present.

The child's recovery was slow but satisfactory.

Case 6: E. G., white, age 5 years. Referred by Dr. K. Complaint—Partial obstruction of the larynx.

About two weeks ago child became strangled on some bread crumbs, severe coughing

at the time. This soon cleared up. One week later child began to get hoarse followed by coughing.

On examination, there is some hoarseness. Temperature 99.2. Pulse 120. Tonsils were slightly inflamed. There is a greyish membrane covering the vocal cords. False cords are inflamed and swollen. Picture of chest for foreign body negative. Smear and culture of larynx show streptococcus as the predominating organism. Several others were seen. No diphtheria bacilli seen.

The child had an uneventful recovery.

These six cases range in age from ten months to five years. All had the same infecting organism. Three had a non-diphtheritic membrane present and three did not.

When a tracheotomy becomes necessary the prognosis is not so favorable.

Dr. Gittings, who read a paper before the Montreal meeting, reports fifteen cases, ten of these requiring tracheotomy followed by six deaths.²

Intubation should never be done, as it is likely to be followed by laryngeal stricture which is very difficult to relieve.

DISCUSSION

The diagnosis between acute stenotic laryngitis and laryngeal diphtheria is often very difficult. In the milder forms, the differentiation is usually simple, but even here the ordinary clinical methods are not sufficient. Among the signs which are suggestive are the barking cough, lack of aphonia, and higher temperature. However, says C. A. Thompson,³ "those may be present in diphtheria, for if the pseudo-membrane is confined to the ary-epiglottic folds, with but little extension of the inflammation downward, the voice may be perfectly good."

Pharyngeal cultures are not to be relied upon. In his series of six hundred and ninety-seven cases of laryngeal diphtheria, cultures from the throat were negative in 38 per cent.

Direct laryngoscopy along with cultures from the larynx offers the best means of diagnosis. Inspection shows congestion and swelling of the ventricular bands, reddened cords, and a greater or less degree of subglottic stenosis. There may or may not be a membrane present.

As soon as the child has sufficiently recovered, the tonsils and adenoids should be

removed as a protection against another attack.

REFERENCES

1. St. Clair Thomson, Diseases Nose and Throat.

Page 495.

2. Archives Oto-Laryngology. September, 1926.
3. A. M. A. Journal. August 27, 1921.

HEADACHE*

R. G. WILSON, M.D., Asheville

Headache is one among the two or three symptoms most frequently suffered. In fact this symptom occupies such an important position in the mind of patient and physician that it is often thought of as a disease and consequently, according to a rather lax habit (as is our failing in many other outstanding symptoms or group of symptoms), is treated as a disease entity.

It is to this important symptom that I wish to call your attention as of special and mutual interest to the general practitioner and the specialist in eye, ear, nose and throat diseases. I shall pass over with scant mention the etiology of the symptom, headache, arising from parts other than the head itself, since these parts are beyond my field of endeavor.

Among the predisposing causes we think of heredity which may account for some tendencies or certain anatomical peculiarities. As to age, it occurs from the teething period to senility, being most noticeable about puberty or adolescence. It occurs with about equal frequency in the two sexes. In women it is most prevalent during the child-bearing period. As to seasons, winter seems to lead, especially if of nasal or accessory sinus origin; also poor ventilation must be considered in winter. The time of day most predominant also depends on cause as if due to congestion of sleep, or faulty posture while sleeping, it occurs in the morning; in mid-day or evening from eyestrains; while that from syphilis is certainly worse at night. Headache is often found in the weak or anemic, or following a long illness or extreme hunger. An active hyperemia produces headache, as seen in in-

juries, in coughing, sneezing, blowing wind instruments or extreme excitement, in passive hyperemia from constriction about the neck and in cardiac or acute pulmonary diseases. Fever from any cause will produce a headache. As to autogenous etiology we must consider constipation, uremia, gastric indigestion, and acute yellow atrophy. Mention might be made of exogenous poisons in which we have several drugs as anesthetics, nitroglycerine, quinine, aconite, belladonna, caffeine, lead, opium and mercury. Also excessive smoking supplies an exogenous poison. Lastly, let us not forget the headache of lumbar puncture and menstruation, the latter supposedly due to congestion of nasal erectile tissue and musosa or possibly a swelling of the hypophysis.

I have rapidly passed over these etiological factors merely giving them mention, which are all worthy of careful and lengthy consideration and which, although familiar to you all, must be kept constantly in mind if we wish to definitely locate and eliminate our cause of headache.

It has not been definitely proven what exact structures are involved in the pathologic process. The brain tissue itself is said to be insensitive to pain, but its surrounding structures are sensitive in varying degrees. We know that the meninges are highly sensitive to pressure irritation whether it be from trauma without tumor or pus formation within, congestion from vascular disturbances, or acute or chronic inflammation with thickening and pressure upon nerves piercing it. Disease of the cranial bones, periosteum, pericranium or epicranium may at times be the seat of headache. The skull has many small apertures and sutures through which

*Read at meeting of Tenth District Medical Society at Sylva, September 22nd.

vessels and nerves pass that may upon slight swelling from any cause produce a tug on the meninges and a resultant headache. The pericranium is continuous with the dura through these apertures and sutures, and also through the orbit and sphenoidal fissures which can readily result in headache from a slight pull.

You may ask why the intermittent pain of brain abscess or tumor? This I can explain only on the vascular change of alternate congestion and depletion through an unaccounted-for sympathetic stimulation. Febrile headaches are probably produced by congestion of intracranial and meningeal vessels. The mode of production of a toxic headache is uncertain.

The pathology of migraine or periodic sick headache is indeed a problem. It has been thought due to some vascular disease as an endarteritis and it is true we have arterial changes, but whether these vascular changes are cause of migraine or the result of migraine is not settled. At any rate we have very clear-cut cases of hereditary periodic sick headaches occurring in young children in whom there are certainly no vascular changes. The chief theory of the pathology in migraine is that the attacks are of vasomotor origin and that whatever else may cause it, the actual attack is due to a vasomotor spasm or dilatation, and, since the caliber of the vessels is regulated by the sympathetic nerves, we assume that migraine is of nervous origin.

Let us now consider more in detail some causes of the headaches which are wholly in the head.

We will consider first brain abscess, which fortunately is not very common yet very important. About 90 per cent of brain abscesses occur in that part of the organ forming the cerebellum, and the frontal and temporal lobes. The last is more frequently the seat of disease than either of the other two. In the majority of cases of abscess in either of these areas the primary cause is to be found in the ear, the nose or the nasal accessory sinuses; so it is well to make a thorough examination of ears, nose and sinuses in order to establish or eliminate the first clue in our suspicions. The headache of brain abscess of whatever location or primary origin has some very definite characteristics, is usually constant, severe, and bor-

ing in type, unrelieved by usual remedies and worse at night; it is usually associated with slow pulse, vomiting, mental depression, somnolence and normal or subnormal temperature. The headache of cerebellar abscess is very persistent and most always confined to the occipital region, and may be constant directly over the abscess. Marked signs of cerebellar irritation as disturbance of equilibrium are present. The headache of sphenotemporal lobe abscess is more intermittent and changeable in location than cerebellar and is more likely to be associated with motor disturbance in the limbs. In frontal lobe abscess the pain is very severe, fairly constant and rather definitely located in the front of the head. In the later stages of abscess of any lobe the headache becomes less sharp, senses in general are benumbed and pain takes on a more dull and heavy nature.

With the associated symptoms mentioned above, and with the locating of a primary focus of infection in the ear or an accessory sinus we should consider carefully the type and nature of the symptom, headache, as an aid in diagnosis of brain abscess.

The headache of mild or uncomplicated ear diseases is not severe. There may be a mild pain on that side of the head where we have an impaction of cerumen, aural furuncle or an otitis media due to pressure or irritation of a small branch of the fifth nerve; but usually the causes of these pains are easy to find in the ear itself, and with a careful history and associated symptoms the diagnosis is usually simple. Headache in an acute or chronic suppurative otitis media which has free drainage is rather uncommon and when it develops rather suddenly we suspect some complication. The pain may be in the frontal region, but is usually occipital or temporal on the side affected. If severe and persistent we should use every means at our command to locate and determine the extent of the trouble, if necessary making an exploratory opening. In my opinion we are certainly as justified and probably safer in the removal of a mastoid cortex for deeper investigation as the abdominal surgeon is in opening an abdomen for purposes of diagnosis.

Headache is almost always present in acute sinus thrombosis, is severe in type and occurs at the height of general symptoms of mastoiditis. If it occurs during a remission of

general symptoms we immediately think of infection of the clot and general blood infection.

In acute meningitis the headache usually starts in the occipital region and spreads to the frontal or includes the whole head, is bursting in character and associated with vomiting, not necessarily of a projectile type, very rapid and irregular pulse, photophobia and marked general excitability.

In nasal accessory sinus disease headache of some type is rarely missing. Grunwald states that headache exists in 100 per cent of acute and in 50 per cent of chronic sinus diseases, and that the severity has no relationship to nor is in any way an indication of the extent of pathology in the sinus causing the headache. It is my belief that many a patient has gone through life taking all manner of treatments as electro and hydrotherapy, special massage, an occasional rub from an osteopath, and in his latter days a few vigorous jabs and twists from the chiropractor, when the real cause of his chronic headache was to be found in the inflammation of a neighboring accessory sinus of the nose. Of course it is to be understood that these persons were never subjected to a thorough rhinoscopic examination. Skillern says that headache is one of the commonest symptoms of sinus disease and of all the symptoms is the least understood and as an indication of disease of any particular sinus is wholly unreliable. He gives six causes of headache from sinus disease: first, swelling of mucosa with pressure; second, negative pressure in sinus from swelling and closing ostium; fourth, ulceration of mucosa involving nerve endings; fifth, absorption of toxins formed in sinus; sixth, disturbance of blood and lymph circulation at base of skull. In chronic sinusitis the headache is dull and often associated with drowsiness, vertigo, mental confusion and wavering memory. In acute sinusitis the headache is usually neuralgic in type and while uncertain as to location it has two stable characteristics, namely; recurrent attacks always in same sinus gives same attack at same place at same hour of the day—e. g., the so-called "sun pain" of forenoon likely due to filling up of the antrum in erect posture. The night pain of frontal sinusitis due to lack of dependent drainage while reclining is characteristic.

Although Skillern states that the site of headache from disease of a given sinus is inconstant, there are certain locations that predominate for certain sinus involvement. I would refer you to this author's more or less definite location of pain in certain sinus conditions in which we have: pain in supra-orbital region in acute antral disease and frontal sinusitis; pain and tenderness over antrum when involved; pain over whole frontal region in chronic frontal sinusitis; pain and sense of weight on top of head in ethmoid involvement, also pain and sense of fullness between eyes and brows; and pain in top of the head and about the temple to the occiput in sphenoid involvement.

We should never forget that of all sensory nerves that may bear a message of pain to the cortex which is interpreted in the form of a headache, the fifth cranial cannot be competed with. And a neuralgic headache might occupy a whole volume in itself; however, a true trigeminal neuralgia is diagnosed by its lack of anatomical or pathological changes and symptoms of a definite and abrupt onset, regular periodicity, relief by pressure and tenderness over foramen of exit.

Headaches due to ocular troubles are very common. Intrinsic strains of refraction and from muscle imbalance are much more frequently the cause of headache than actual ocular diseases. The intrinsic causes of headache are usually refractive and of these the most common are astigmatism of some type and simple hyperopia. The headache is usually frontal in location, comes on after fatigue and long use of eyes probably with poor illumination, worse in afternoon or evening and often associated with other ocular manifestations. Extrinsic causes are usually muscular and the pain is most often in the occipital region. It is usually the small amount of imbalance which is not noticeable without special examination that gives the most trouble. The large muscle defects as the tropias or squints rarely cause much headache, since the squinting eye makes no attempt to fix an object along with the other eye and consequently undergoes no strain.

In the prodromal stage of glaucoma there are often no objective signs to be seen in the eye in a casual observation even though headache may be rather severe. However, with pain increased by excitement or coming

on in the evening and relieved by sleep, plus slight blurring of vision with rainbow halo about lights and probable increase in tension, one should be very suspicious of glaucoma as a cause.

These briefly mentioned ocular causes of headache you will notice have practically no visible eye changes to account for the trouble, so I would stress the importance of careful examination before eliminating the eyes as offenders. Remember that normal vision

does not exclude a grave refractive error.

I have intentionally left out many causes of headache which are found in various parts of the body and discussed briefly the most important ones found in the head. I have offered nothing in the way of treatment of headache, which, however, is obvious to you by removal of the cause. I would like for us to remember the importance of a diligent and thorough search for the cause of our most common and annoying symptom, headache.

The size of the scar of previous vaccination, the character of the scar (whether pitted or smooth) and the amount of scarring (whether marked or faint) have no practical bearing on a person's immunity to vaccinia or variola.—Leake and Thomas, in *Journal A. M. A.*, Oct. 2, 1926.



PRESIDENT'S PAGE

Tri-State Medical Association of the Carolinas and Virginia

A. J. CROWELL, M.D.

Your President gave an outline of a plan for a Clinical Organization which he feels could and should be fostered by the Tri-State Medical Association. In this issue he is pleased to announce that he has arranged such a trip to four of South Carolina's larger cities, not only to see how much interest might be taken in such an organization, but also with a view of stimulating a greater interest in the Tri-State, and more especially its February, 1927, meeting in Columbia, S. C.

The itinerary and program is as follows:

Leave Charlotte, 3 p. m., November 2, 1926.

Arrive Spartanburg, 6 p. m.

Attend Spartanburg County Medical Society 8 p. m.

Attend Clinics given by members of Spartanburg Medical Society 9 a. m., November 3rd.

Leave Spartanburg, 11:30 a. m. Lunch at Greenville at 1 p. m., and meet with Greenville Medical Society immediately thereafter.

Drive to Columbia in time for dinner. Meet with Columbia Medical Society at 8 p. m. November 3rd.

Clinics by members of Hospital Staffs 9 a. m. November 4th.

Early lunch and drive to Charleston for dinner, and meet with their Medical Society at 8 p. m.

Clinics at the various hospitals 9 a. m. November 5th.

Early lunch and return home in the afternoon.

Much interest has been manifested by the members of the profession in each of these cities, and we have every assurance that the trip will be both pleasant and profitable. We are making a special request that no entertainment be provided for the visiting party by the local profession; such would ruin an organization of this kind. The less entertainment given any society, the better the organization from a scientific standpoint.

The trip has been decided upon and the above program definitely arranged.

The members of the profession living in the above named cities, desire to know as early as possible the number to expect, and the line of work they are especially interested in, in order that clinics may be arranged accordingly. Kindly give me this information at once and I will pass it on.

Automobile accommodations will be arranged from Charlotte for 25 or 30, if you will notify me sufficiently early. Those coming from North of Charlotte can arrive at ten and eleven a. m. Decide now to go and notify me at once.

PRESIDENTS' PAGE

Medical Society of the State of North Carolina

JNO. Q. MYERS, M.D.

The more a man is educated, the more it is necessary, for the welfare of the State, to instruct him how to make a proper use of his talents. Education is like a double-edged sword. It may be turned to dangerous usages if it is not properly handled.

—*Wu Ting-Fang.*

THE HOSPITAL A WORKSHOP

There is a fertile field in North Carolina for every Private Hospital; also there is the greatest need for the County Hospital as the center for all health work; just the same need as for private store and public market place. We must in order to do the best for all the people of the State, have a place where all classes can get the best medical and surgical attention and health surveys and periodic medical examination.

The hospital no longer stands in disrepute as a place to go as a last resort. The hospital is being recognized as a workshop where there are facilities that represent the last word in scientific medicine and workers who represent the best in training and skill that modern medicine affords. The public is coming to realize that a hospital is a community problem, that it shall have community support and shall serve everyone—the poor, the rich and the great middle class on whom a great hardship has come by reason of the tremendous cost of medicine if it is not afforded them by an institution at a cost which shall not make it prohibitive.* The public is coming to realize that hospital practice by the medical profession will not be abused, that the hospital does not exist for a few select physicians of a community, but is accessible to all well-trained medical men.

It is obviously unfair to the young man who has thoroughly trained himself in mod-

ern medicine and satisfactorily met all the prescribed standards of qualification to be turned loose in a community to try to practice that type of medicine which he has been trained to practice, without hospital facilities. It must ever be true that a certain per cent. of illnesses do not require hospital care; this is especially true of the acute illnesses where the diagnosis is obvious and definite and where the course of the disease is likewise definite. Under such circumstances, good care can well be improvised at home and the well-trained physician who does home work suffers no handicap other than that of time in carrying into the home that necessary medical attention.

We must come to look on a hospital as a complete workshop, that is, not a place to hospitalize bedridden patients alone for diagnosis and treatment, but as a workshop for diagnoses and advice as to treatment in the ambulatory case, such as is being done in our free clinics and part-pay clinics. The same principle in diagnosis must be applied to all material. It is a well recognized fact that present day medicine is organized to care for the destitute and the very well-to-do, but the great middle class is unable to buy modern medicine. Fortunately, the numbers whose conditions demand this type of medicine are in the minority so that society suffers only in a limited way.



SOUTHERN MEDICINE AND SURGERY

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Published to make the average doctor better than the average; to improve his information, his usefulness, his standing and his income.

"DOCTOR": NOT "ALLOPATH"

There is a superficial appearance of reason in the contention of members of the fantastically named cults, purporting to practice healing, that, since they cheerfully concede good in our "school" of medicine, even recommending some of our measures under certain conditions, it is unreasonable and ungracious for us to refuse to do as much for them. This contention appeals to the populace because of at least these three facts: the populace loves what it calls "a sporting proposition"; and it seldom looks deeply into a problem, or reasons closely about the little on the surface.

As ordinarily represented to the public by the cults, each school of doctors is founded on some catchy theory of healing. Some regulars have heard this so long and so frequently that they accept it as true. Of the regular medical profession this is not only not true; it is an untruth well calculated to mislead. And who did the calculating?

The word "allopathy" would never have been put into the mouths of men, had not Hahnemann conceived his remarkable idea of a system of symptomatic treatment and called it "homeopathy." Having given his school of thought a name conforming to its teaching, he was moved to do as much for those who had been going along contentedly

as "doctors of medicine," unqualified and unembellished; so he gave to the practitioners of established medicine the name "allopaths," and to what he represented to be their theory of practice, the name "allopathy." It has been a true "Greek gift."

There is much in the history of Hahnemann to lead one to the opinion that he was honestly and sincerely interested in advancing the healing art; though it would require unusual powers of imagination to gain any idea of the mental operations which could result in his conclusions as to infinitesimal dosage. His *similia* hypothesis was undoubtedly consequent on an inability to distinguish accurately between symptoms proper to the disease, and evidences of the resistance of the body to the disease. Even today, though much progress has been made, and we have means of investigation which have many times multiplied the possibilities along this line; in most instances it would be rash to attempt to make such a distinction. When Hahnemann first made his pronouncements on homeopathy diagnosis was made almost solely by asking a patient questions, looking at his tongue and feeling his pulse; and treatment consisted largely of heavy bleeding, vigorous purging and frequent blistering. There can be no doubt that the influence of his school in mitigating these severe measures was salutary. Neither Hahnemann nor any one else had any very clear idea of the essential nature of disease processes. To the medical world of the time the most conspicuous symptom *was* the disease. Read any standard textbook on medicine published in the early years of the nineteenth century, even; and see practically everything given on what we now know as heart and kidney disease (and some others) treated of under the disease-name "dropsy." The treatment was naturally directed to the symptom and not to the individual, nor the organ giving rise to the symptom.

This being the state of medical knowledge and practice, bacteriology not having been born; it is readily understandable that one eager to improve the results of treatment of the sick would proceed along the very lines that Hahnemann did, and that (with the exception noted) he would arrive just where he did.

All the foregoing, however, does not lessen

the injury he did the race, through interference with the increase in influence of scientific medicine, by dubbing it "allopathy." By this very act it was made to appear that medical men were here divided, and that they formed two groups, the members of each group holding as their rule and guide of practice, a fundamental theory diametrically opposed to that held by the other group. Hahnemann professed to base his treatment on the theory that *like cures like*; he professed to believe, and he taught, and his followers teach, that regular medicine teaches that *unlike cures like*. Never has there been such a teaching. The very fact that drastic purgation was so much in vogue at that time, when certainly the majority of the patients did not come down with griping and purging, should have prevented the commission of such an error.

The principles of treatment of the regular medical profession are, and have always been: remove the cause of disease and repair its ravages; make the patient comfortable; support his system. On these three hang all the Law and the Prophets.

In carrying out these principles we are not in the least concerned with *like* or *unlike*. Though earnestly striving to know the why?, we have never waited for a logical explanation of good results following the administration of a given treatment, *once it had been shown that the treatment brought about the results*. We inoculated against smallpox when nothing was known of the principles of immunity; we vigorously plied the syphilitic with mercury and the victim of malaria with quinine long before the finding of *treponema* or *plasmodium*. We know that good things can come out of Nazareth, and have given equal welcome to the belladonna of the homeopaths and the digitalis of the old woman of Shropshire. Very likely the osteopaths have caused us to pay more attention to the benefits to be had from massage.

Founded and continuing on these broad principles, it is but natural that regular medicine has contributed everything of solid value to the progress of the battle against disease. What has the homeopath, eclectic, Eddyite, osteopath, naturopath, or what not, done for controlling smallpox, typhoid, diabetes, diphtheria or scarlet fever? Which of them robbed surgery and labor of their agonies,

gave ripe wits to an imbecile cretin, devised an operative procedure of value, or did anything for tuberculosis of the lungs or spine?

Point out these things to your legislators and prominent citizens when they plead for "broadness" and "recognition of a rival school."

If the extent to which the health of the people is dependent on the continual working and watching of the regular doctors, were known to the general public; and if it were known how much of the energies of these doctors are expended in partially thwarting the hindering activities of the cults; we would have such support in public opinion as has never been given any profession; every man desiring to set up to treat the sick, by whatever means, would be submitted to examination at the hands of our Board of Medical Examiners; and chiropractors, certain kinds of "Bishops," "Indian doctors," and a great many other frauds would be a part of the tale that is told.

Every doctor can do more than he thinks toward spreading this knowledge, and the first thing to teach thoroughly is that we are not *allopaths* committed to any narrow theory of medicine but *regular doctors*, with open minds, seeking the truth for the good of ailing mankind.

CASE REPORTS AS A REGULAR FEATURE

We wish to repeat it so often that all will come to know that this journal is published for the general doctor. Evidences of this have been afforded all along our course. As a new evidence, we are instituting, beginning with this issue, the publication of informative and useful case reports. It is our confident hope that enough of these will be available to enable us to fill some pages of each issue.

It will be noted that we used the word *informative* rather than *interesting*. Of course, in some instances the two are synonymous, but the latter adjective sometimes applies to freakish things which can teach nothing, and, therefore, are utterly useless. As an instance may be cited a recently heard description of a woman going into labor, and examination revealing no *cervix uteri*. This is an extremely unusual condition, perhaps even unique; but, so far as we know, a globular uterus is just as useful as one of the usual

pear shape; and, moreover, we can not see where any information can be gained from this case which can aid in the management of any subsequent case.

Our "Case Reports" are begun with accounts of informative cases. We hope every doctor will feel free to send in such reports. The maxims of great clinicians have been "Observe; Record." By observing and recording all doctors learn; they should share their learning with others, especially in such a way as this, by which there will result an exchange of learning.

Many doctors will take the time to write a few hundred words about a case having teaching value, when they would not take the time to write an extended article on the subject illustrated by the case; and, we are inclined to think that it would be well to depend more and more on case reports, for they at least save us the tedium of reading and re-reading the history and near-history of every disease all the way back to that probably mythological character, Hippocrates.

Send in reports of your cases. They will be widely appreciated.

A MEDICAL MEETING OF THE RIGHT SORT

The Ninth District Medical Society held its annual meeting at Mocksville on the seventh. The district contains none of the larger cities of the State and does not rank near the top in population: the meeting was held in a small town almost on the very edge of the district. Despite these handicaps, an attendance was brought out and a programme rendered the equals of which can hardly be found among district medical meetings.

The morning session was taken up in the usual manner with the reading of papers; but these papers were much beyond the usual in teaching value.

The afternoon session, aside from a brief address by the president of the medical society of the State, was devoted wholly to a symposium on what might be called "The Inter-relation between Mental Disease, Wrong-doing and the Law;" the participants being a teacher in the State's university, an ex-president of the State's bar association and a distinguished alienist from a neighbor State. The enthusiasm evoked was remarkable. A movement was started to have this

matter discussed before the parent organization, the Medical Society of the State.

The arrangement and conduct of the meeting was abundant evidence of the hearty co-operation of all the officials, and it is no disparagement of others to pay a special tribute to the value of the work of the secretary, Dr. J. W. Davis, of Statesville. Names of other officers appear as an appendix to the set programme with other news notes in this issue. A one-day programme which can retain the attention of a group of doctors from nine-thirty to five-thirty is an accomplishment of the first order. Some of us never saw it before.

Finally, *Southern Medicine and Surgery* gratefully acknowledges the compliment paid it by the Ninth District Medical Society in making this journal its official organ. This stamp of approval on our efforts, our achievements and our aims will bear weight with other bodies of medical men and with individuals; but, aside from this advantage, is that greater benefit which comes from this assurance of the confidence and support of this very exceptional body of doctors.

EX-EDITOR BAKER: EDITOR BUNCH

With this issue Dr. Geo. H. Bunch takes over the editorship of the department so long and well filled by Dr. A. E. Baker. Dr. Baker found it necessary to lighten his labors by retiring from this office, and we congratulate the readers of the journal on our good fortune in obtaining for it the services of the president of the South Carolina Medical Association.

The former editor contributed much to the improvement of the journal and won for himself the regard and gratitude of the management. His department was filled with sound, dependable teaching out of his abundant experience.

Agreeably to a new feature of our policy, the Department of Surgery will be conducted with a special view to the needs of the general practitioner.

The office of president of the medical society of a State brings its occupant into that close touch with all of its doctors which will acquaint him with the needs of general doctors. Readers of *Southern Medicine and Surgery* will greatly profit therefrom.

MERCUROCHROME DANGERS

Some recent reports of success with mercurochrome given intravenously for the destruction of general infections, while mentioning the disagreeable febrile reactions (which, however, is counted as essential to favorable results), contain no reference to the probability of injury to the kidneys.

In the 1925 *Transactions of the College of Physicians*, of Philadelphia, is an extended, and apparently a judicious, discussion of the intravenous use of this drug. Dr. Alfred Stengel opens with: "The demonstration by Piper that the intravenous use of mercurochrome in doses sufficient to sterilize the blood is a safe method of treatment of septicemia constituted a real advance in therapeutics that merits general recognition." A perusal of his case reports indicates, at best, but indifferent success. Dr. Barton Cooke Hirst says: "During the past four years we have used mercurochrome intravenously in 17 cases of puerperal sepsis with septicemia. Of these, 7 have been permanently cured. The remaining 10 patients died." He suggests that the ultimate results of this method of treatment remain to be determined.

Dr. Edmund B. Piper opens the discussion. He calls attention to the dangers. "I believe it is dangerous," says he, "when there are definite contraindications Symptoms of acute nephritis should be looked upon as a definite contraindication." Opium if used at all should be used very guardedly. Dr. John A. Kolmer says, "Since mercury is highly renotoxic, the drug should not be given at all or at least not in maximum dose when there are evidences of nephritis." He has seen severe ileocolitis follow its use. Dr. Jay F. Schamberg states his belief that "the tolerance of different patients to mercurochrome varies," and attributes to the drug the death of a patient with pemphigus. He regards the outlook for the future as most hopeful for this line of treatment.

It is very evident that this body of medical men, while looking hopefully for valuable results from this use of this drug, is well convinced that the dangers are real and serious, and that, though the prompt fever is the most unpleasant consequence, the remote kidney injury constitutes the danger to life.

INDIGESTION AS A DIAGNOSIS

To a great extent we have got away from *fever, biliousness, neurasthenia* and *nervousness* as diagnoses; but we are having great difficulty in leaving behind a term which is perhaps the most potent for evil of them all: to wit; *indigestion*. The other terms cited carried with them the immediate suggestion of being symptoms, and, in many instances, those in whose cases such diagnoses were made would demand more particulars; but indigestion, while not even a symptom, somehow *sounds* more like a proper name for a disease.

Patterson, in the issue for the current month of *The Journal of the Medical Association of Georgia*, discusses the fallacy of using this term as a diagnosis and reports illustrative cases. This writer quotes Cabot as having said that, in a series of 15,000 cases, the disease giving rise to this symptom-group was outside the stomach in eighty per cent. of cases. Five recent cases are cited: In the first and third duodenal ulcer, in the second carcinoma of the sigmoid, in the fourth gastric ulcer, and in the fifth an inoperable tumor of the lower bowel, were found. These were the *diagnoses*; indigestion was the *symptom-group* common to all.

Failure to go beyond the symptom-group to the real disease is a sin of omission of which we should be heartily ashamed; and, which is much more important and serious, such failure is responsible for unnecessary loss of life, the extent of which we can not accurately reckon, but which we know to be by no means insignificant.

Indigestion, of itself causes no symptoms. No one *digests* the cellulose of wholesome vegetables and fruits, or fats of any kind; but their *indigestion* produces no ill effects.

When tempted to tell a patient he has indigestion, make it an invariable rule to consider the probability of appendicitis, gastric or duodenal ulcer, gall-bladder disease, tumor within the abdomen, or even pulmonary tuberculosis or organic heart disease being the disease causing the symptoms.

Think the number of patients, with whose cases you are familiar, whose lives have been needlessly sacrificed on the altar of *indigestion* and see to it that you do not add to the number.

NEWS ABOUT DOCTORS

Newspapers have correspondents to gather news locally, special correspondents at strategic points, and the services of great newsgathering organizations to send in to it items of information on the things going on in their fields of circulation. From the nature of things, a medical journal can not have such a service, and so, is necessarily dependent on those desiring the exchange of bits of information of especial interest to doctors, and mostly about doctors.

We know that subscribers to this journal are greatly interested in what other doctors over the State and section are doing and that this publication is the proper medium for this interchange.

The attention of every reader is directed to the letters from the secretaries of the Buncombe and Cumberland County Societies, respectively, published in this issue. Everyone knows how hard and unappreciated is the work of a secretary; yet these men enthusiastically respond to requests for information as to what is going on medically in their counties. They are proud of the doings of their doctors and they want to spread the news.

All of us have our little vanities. It chagrins a budding young surgeon or ophthalmologist to have a friendly disposed doctor living a hundred miles away, who hasn't heard about his "post-graduating," recommend him as a family physician; and a widow devoted to the memory of a husband, who, to her at least, was distinguished, is hurt and humiliated by the stream of letters and reprints which continues to pour in, affording mute but unmistakable evidence that the writers have not even heard of the good man's death.

Make up your mind now to send in a letter (or a postcard) each month, and early in the month, so that doctors from Manteo to Murphy will know when any other doctor has re-married or been otherwise honored, bought a new car, caught a seven-pound bass, made enough money to be able to retire into the real estate or banking business, or gone to his last reward.

On the Death of Dr. Hunnicutt

Resolutions passed by the Buncombe County Medical Society on the death of Dr. W. J. Hunnicutt, September 6, 1926:

"When one of our associates passes from that vale between two eternities it is fitting that we should pause for a moment and reflect on his life and influence.

"It has been the custom for many generations when a member of a society or fraternity or one active in civic or other affairs in a community passes through that mysterious change we call death, that the people with whom he had been associated assemble and pass suitable resolutions on the life and character of the departed one.

"This is recognized as commendable by civilization; not that any resolution or words can be of any benefit or harm to the dead but that his virtues and helpfulness to his fellowman may be remembered and recognized by the community in which he lived. Whatever frailties the dead may have had may be left with implicit faith and trust, upon the bosom of his Father and his God.

"It is eminently fitting that the Buncombe County Medical Society should officially recognize the sterling worth and integrity of Dr. Hunnicutt. Since coming to Asheville he has been active and progressive in medical, fraternal and civic affairs. He was the trusted family doctor,—a doctor of the old school,—a type fast slipping away.

"Resolved: that, in the death of Dr. Hunnicutt the Buncombe County Medical Society has lost an active, reliable and conscientious member; one who was loyal to the high ideals of the medical profession and loyal to honor and truth as he saw it. He was active and interested in all civic affairs that had for their object the uplift, the betterment and the happiness of his fellowmen.

"Resolved further, that we express our deep sympathy to his widow and family and that a copy of this resolution be spread upon the minutes of the society.

"C. E. COTTON,

"W. L. DUNN,

"C. C. ORR,

"Committee."

DEPARTMENTS

INTERNAL MEDICINE

PAUL H. RINGER, A.B., M.D., *Editor*
Asheville

THE NEED OF PLAY FOR THE DOCTOR

Medicine is our work, and, because of its very nature we are forced often to sacrifice ourselves to its demands. Pleasures have to be given up, an afternoon off abandoned, and our own desires regulated to a subordinate position. This is as it should be and as we are the servants of humanity we would not have it otherwise.

Nevertheless, the physician has certain rights of his own, he has certain duties toward his wife and his children, and, unless he bears this fact in mind, he is too apt to become the slave of his patients and to be at their beck and call not only when they need him, but also at any time that it suits their convenience. Let us for a few moments look at some of the ways by which the conscientious doctor becomes the slave of those whom he serves.

FIRST: SUNDAY OFFICE HOURS

Every man needs one day's rest in seven, and, in this land of ours, Sunday is the logical day. The children are not at school, business is at a standstill, and no doctor should do any work on Sunday save that demanded of him by the very sick under his care. Too many physicians make the mistake of using Sunday as a "clean-up" day—paying all the scattered relatively unimportant calls that more pressing work during the week has caused them to postpone. Others give the excuse that many of their patients "can't get off" during the week to come to the office: an individual really in need of the services of a physician manages to get off, and this flimsy excuse can be neutralized by having evening office hours two days a week. If Sunday office hours are held and odd calls paid, Sunday becomes like any other day—no rest or change is secured. The week is started just as the week was ended: in work.

Variety is the spice of flife. Doctors need it.

SECOND: SEEING PATIENTS AT THE OFFICE EVERY DAY AT ANY TIME

In an emergency, the physician is of course at the beck and call of his patient. In the absence of an emergency, however, the physician is entitled to regulate his time as he sees fit. All of us spend time in our offices during which we are busy with matters connected with our practice, but not with seeing patients. There is a certain type of individual (we all know him) who thinks that any time he happens to find the doctor in his office is a time when the doctor is idling away and is willing and desirous to talk to him. This type of individual wanders in and usually says: "Doc, I was passing by and saw you in your office so I thought I would come up and have you look me over." He is of the type that rarely has anything the matter with him and that still more rarely expects to pay for professional services; but he is a great time consumer. Many physicians allow such an individual to take up their time and attention and give as an excuse the fact that they fear that were they curt they might lose his patronage. As a rule the patronage alluded to is far better lost than retained. The public should be educated to recognize the observance of office hours; they have a real purpose and real limits. The physician owes it to his clientele and to himself to see that they are observed.

THIRD: FAILURE TO LET IT BE KNOWN THAT ON A GIVEN DAY AT A GIVEN TIME THE DOCTOR IS ENJOYING HIMSELF AND DOES NOT WISH TO BE DISTURBED SAVE IN AN EMERGENCY, WHEN HE IS ALWAYS AVAILABLE

Every physician should have some non-medical hobby and indulge in it. It matters not what it is: golf, fishing, hunting, tennis, bowling, working in the garden, watering the lawn, automobiling, stamp collecting, the ball game, some form of diversion. His patients should know that he has this hobby and

should also know that on a certain day and at a certain hour he is practicing it. After all, are we not men first and physicians from choice? Our brothers who are following other callings do not hesitate to proclaim their predilection for this or that form of play; why should we? The one thing we must keep in mind is that we must be within call of our patients in the event of some sudden occurrence that demands our presence, or that we must make arrangements with a colleague or an assistant to be within reach should need arise. Many physicians feel as though they were playing "hookey" when engaging in some harmless sport—nothing is farther from the truth. They are recreating themselves and making of themselves better doctors for the morrow.

FOURTH: FAILURE TO TAKE A REAL VACATION ANNUALLY

Although, because of circumstances beyond control, the physician may be prevented from taking a vacation of three to four consecutive weeks every year, this should be his aim. During the vacation medicine should be the last thing in his mind. He should go with his family to some spot a good distance away from his home and there indulge in that which pleases him. No medical books or journals should accompany him thither; no papers should be written or thought out while away, but he should yield himself absolutely to the joys of the moment and wipe the office and all connected therewith from his mind as one washes off a slate with a damp rag. He will return clear of mind, sharpened in judgment, apt in discrimination, a sounder man and a better physician, freed from the pinpricks of petty annoyances, ready and eager to take unto himself the burden of the troubles and anxieties of others.

Have I given the impression that the doctor should slight his work, should be a creature of opportunity and should dodge his responsibilities? God forbid! I mean to make it clear that the doctor is a man among men—neither greater nor less than his fellows: able to do as much work as his neighbor, no more, no less; requiring just as much relaxation, if not more, than his brothers of business or other professions, and able to give the best that is in him only when that best is available through sufficient regularly sought recreation

or relaxation. The public must have consideration for the doctor; it must not overburden him with its troubles nor call upon him when he is not actually needed. The doctor must have consideration for the public, and must realize that only by relaxing tension and seeking change in devoting himself to that play which most appeals to him, can he in the hour of stress and of trial render the full meed of service, backed by sound and scientific knowledge and judgment that is expected of him by those seeking his aid in this the twentieth century.

SURGERY

GEORGE H. BUNCH, M.D., *Editor*
Columbia

SUPERB RESULTS IN TREATING APPENDICITIS

It is with great pleasure that we call the attention of the readers of the Journal to "A Study of the Mortality in Appendicitis," read by Dr. LeGrand Guerry before the American Surgical Association May 25, 1926, and published in the August number of *Annals of Surgery*. Dr. Guerry reports a total of 2,959 cases of appendicitis operated upon by him during the last 25 years with only 16 deaths, a mortality of 0.54 per cent. There were 1,241 cases of chronic appendicitis operated upon without any deaths; 688 cases of acute appendicitis with 1 death (0.15 per cent); 570 cases of ruptured appendix and localized abscess with 4 deaths (0.7 per cent); 85 cases of perforation and diffuse peritonitis with 7 deaths (8.2 per cent); 9 cases *in extremis*, were simply drained, with 3 deaths (33.3 per cent); 366 cases in which the appendix was removed in the course of other operations with 1 death (0.27 per cent).

Dr. Guerry points out the danger of early operation in cases of perforation and diffuse peritonitis, preferring to wait according to Ochsner's teaching until localization has occurred. His results in this class of cases are illuminating and convincing. He reports 85 cases of perforation with diffuse peritonitis and early operation with 7 deaths (8.2 per cent mortality) and 123 cases of perforation with diffuse peritonitis and deferred operation with only 2 deaths (1.6 per cent mor-

tality). The difference between 8.2 per cent mortality after early operation and 1.6 per cent mortality after deferred operation is striking. We believe Dr. Guerry's results in this class of cases are the best reported in medical literature. We congratulate him on his good work and on his able presentation of the subject.

DERMATOLOGY

JOSEPH A. ELLIOTT, M.D., *Editor*
Charlotte

THE SYPHILITIC PREGNANT WOMAN

The care of the syphilitic pregnant woman is one of the most difficult problems for the syphilologist to solve. The question that immediately confronts the physician is,—should the woman receive specific treatment and, if so, what drugs should be used. In deciding this question one must recognize the dangers to the mother and contrast these with the benefits that accrue to the child. In the care of the mother there are two things of prime importance to be considered; first, her physical condition; second, the activity of her infection. If the mother's physical condition is impaired one must be guided by the severity of the impairment as to the choice and amount of treatment. In rare cases treatment is contraindicated altogether. On the other hand, if the mother's physical condition is good, treatment should be instituted and pushed with vigor. Especially is this true if the infection is active and of recent origin. The earlier the pregnant mother is treated, the better the chance for a normal baby.

This problem was discussed at length at the French Conference on Hereditary Syphilis, held in Paris in October of 1925. Milan¹ stated that in the vast majority of cases, if treated judiciously, pregnancy takes a normal course and terminates in the delivery of an apparently normal child. It is his opinion that the arsphenamines should be used with a small initial dose, but rapidly increased to the full dose. After a series of arsphenamines, he gives a course of mercury. Boas and Gameltoff's statistics showed 20 per cent healthy children from patients treated before pregnancy and 80 per cent from those treated during pregnancy. Galliot reports the treat-

ment of fifty-six pregnant women over a period of five months; twenty-nine of the number received arsphenamine, while the remaining twenty-seven received bismuth. Twenty-six or eighty-nine per cent (89%) of those receiving arsphenamine were delivered of normal children, while twenty-three or eighty five per cent (85%) of those receiving bismuth bore normal children. These were all advanced cases, therefore the percentage of normal children following treatment was somewhat lower than in the average run of cases. Findlay reports fifty cases treated with ninety-four per cent (94%) healthy children. He calls attention to the fact that a normal baby born of a syphilitic mother may have a positive Wassermann at birth, which will revert to a negative within a few weeks. This he explains by the presence of antibodies which have passed over from the mother and not to the presence of spirochetes. He gave as few as four injections of nearsphenamine and as high as forty-two, with good results even in cases not treated until the seventh or eighth month of pregnancy.

The small amount of treatment necessary to protect the child is explained by the assertion that the source of infection in the fetal and maternal decidua, which on account of its marked vascularity is easily reached by the drugs in the circulating blood.

The striking fact which was emphasized during this meeting was the high percentage of normal children borne by syphilitic mothers, who received treatment during the child carrying period, as contrasted to the small number of children borne by syphilitic mothers who did not receive treatment during this period even though they had had considerable treatment before becoming pregnant.

Our experience, while at the University of Michigan hospital, was very similar to those reported. Every woman coming into the maternity ward was examined both clinically and serologically for syphilis. The percentage of normal babies was high in the treated cases, while the accidents caused by treatment were practically negligible. We strongly urge careful and vigorous treatment of the syphilitic pregnant woman, as a means of materially reducing our already too large number of

congenital syphilitics.

(1) Published in "Ann. Derm. et Syph." and abstracted in the *Journal of Chemotherapy*.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

FRACTURES—A WORD AS TO THEIR MANAGEMENT

Contributed by
WM. A. BOYD, M.D.
Columbia

Though much has been written on the treatment of fractures, many results are still unsatisfactory. What's the reason? Perhaps the British were on the right trail, when they transferred the management of fractures from the General Surgical Service to the Orthopedic Service. It seems but rational, that if the orthopedist is to be called, because of better training, to treat the mal-unions, non-unions, and other ill results of fractures; better results, much less discomfort, and loss of time to the injured would occur, if he were called in the beginning. Perhaps that day will eventually come. The writer has been impressed with this from observation of the apparent lack of appreciation of the real underlying factor in average fracture work.

It must be admitted, that the preservation of function in the fractured part is the essential goal of treatment, and while perfect alignment, with preservation of function is the true desideratum, under no circumstances should perfect alignment be the goal, at the expense of function. The old saying, that the treatment of fractures requires only "brains and splints," is as true today as yesterday, but how often do we see cases that have been treated only with splints!

From observation and experience, we are convinced that most of the ill results of fractures, the after impairment of function, the disabilities, the discomforts—are due to the following causes: (a) repeated, unintelligent efforts to obtain perfect alignment, in so doing, inflicting permanent injury on the soft parts; (b) splints improperly applied, with resulting impaired circulation, edema of the soft tissues, and finally a true fibrosis taking place in the joint structures, tendons and soft

tissues: especially is this the case in fractures of the forearm and leg; (c) too long a period of fixation.

It is indeed time that a commission of undoubted authorities, be appointed, by some one of our surgical associations, to sift out and study this feature and give to the medical world a definite table to work by. This suggestion has recently been made in one of our contemporary journals, and we eagerly endorse the idea.

From our own experience with a large amount of fracture work, we are convinced of the fact that perfect function is entirely compatible with imperfect alignment, and that perfect alignment, does not necessarily insure perfect function; that where a reduction, insuring function cannot be obtained by a careful, gentle surgical effort under general anesthesia, function will then best be preserved by an open reduction; that when pain persists, and is real, after reduction, it is due either to a faulty anatomical position, or to the applied splints and demands immediate inspection: an hour or two might mean future loss of function and permanent disability.

In the handling of our fracture cases before attempting a reduction, for the future welfare of the patient, let us first recall the function of the part injured which must be preserved, then the action of the muscles producing the displacement, and finally let our knowledge guide our hands, using splints only to maintain and prove the correctness of our knowledge and judgment. By so doing, the injured will often be saved hours of pain, and months and years of disability, and we as surgeons will bring greater credit to our profession.

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

WHAT IS THE MIND?

"An Introduction to the Study of the Mind" is the title of a little volume that has just come into my hands. It is written by Dr. William A. White, the superintendent of Saint Elizabeth's Hospital, in Washington City. Dr. White writes with such clarity of

expression, and he is so happily helpful in his illustrations, that I believe he could easily give one a clear understanding of logarithms or of the law of relativity. I have never read a contribution from his pen without being both delighted and informed by it. His pen-point is always illuminated. The present little book of 116 pages is intended for medical students, beginners in the study of mental disease, social workers, and all others interested in the operation and the conservation of the human mind.

Dr. White does not allow the reader to assume that the mind is a simple phenomenon, whose activities are as easily understood as certain other phenomena of nature, but he encourages the belief that the mind can be studied in the same way that other functions of the body can be studied, and that a fairly full understanding of mental functioning can be reached by such a method. He wastes few words in an attempt to formulate a definition of the mind but he does the same thing inferentially and comprehensively. Dr. White thinks of the mind as that attribute of a human being by means of which he makes adjustment to his environment. Mentality is not a function of the brain alone. It is the manifestation through the central nervous system of man's whole effort to adjust himself to the world around him. Mind is not the function of an organ; it is the exhibition by means of the nervous apparatus of all man's efforts to get along in the best possible fashion in the neighborhood in which he happens to be. This represents the integrative action of the brain and the other nervous mechanism. Various chapters in the little volume are devoted in brief fashion to a consideration of different mental phenomena—for example, What Does the Mind Do? What are Mental Processes? A Half Million Years of Progress? (It seems all but blasphemous even to think of Man as a half-million years on this Earth!) How is the Mind Studied? Terms in Which I Think About the Mind. The Machinery of the Mind. There are other short chapters which deal with curiosity, the wish, The Mind of the Savage, The Mind of the Child, Love and Hate, and the final chapter is "On Bad Thinking in Medicine." No other little volume in recent years has brought me keener pleasure than White's little book. It states

no new facts, perhaps (there may never be any new facts) but it tends to drive away the notion that the Mind is some god-like, mysterious human attribute that cannot be studied without risk of profanation of the individual who tries it. The Mind is probably no more mysterious nor incomprehensible than sweating. Both constitute activities of human life, are necessary, and can be studied. Dr. White thinks of the Mind, whatever it may be, as the great executive of the body, and he looks upon the study of that function of human activity as a great human engineering problem. All physicians, and all other folks, too, who are interested in themselves and in others should get the book.

CHILD-BIRTH AS A MIND-DISTURBER

The American Journal of Psychiatry (it is a good medical journal and more general practitioners should read it) for July, 1926, carries an article with the following title: A Study of Psychoses Occurring in Relation to Child-birth. The report is made by Dr. Elizabeth Kilpatrick and Dr. Harry M. Tiebout, both assistant physicians in Bloomington Hospital, White Plains, New York. That hospital is an excellent institution in which the most commendable medical and mental work is carried on.

A sort of preliminary note calls attention to many of the normal changes in body and in mind that take place in the pregnant woman. These changes are observed in the general increase in size of the woman, the laying on of fat, the storing up of nitrogen and of certain inorganic elements, such as iron and calcium. Early in pregnancy the digestive tract is disturbed by a tendency to nausea, and later by constipation. The ductless glands especially tend to enlarge, and presumably function more vigorously, or else make preparation for greater activity.

The mood of the pregnant woman changes. At first there is increased irritability with a tendency to gloominess and apprehension, but that state eventually in the normal woman gives way to a feeling of well-being. With the increase in size of the abdomen difficulties arise which may be largely of mechanical origin. The bladder is pressed upon and bothered; because of inability to find a com-

fortable posture sleeplessness results, and a fear of the final outcome may be an added factor in causing insomnia. In most expectant women some such changes as these are normally encountered, but the usual state of feeling and of being reasserts itself after labor.

But the report concerns itself in considerable detail with seventy-two women who became practically insane during or soon after labor. The mental disorder was not different in type from that often found in those who had not been pregnant. That statement means that there is no such mental condition as puerperal insanity, as we were once taught. The same sort of insanity occurs in association with labor that occurs independent of such condition. Men as well as women have the same kind of mental disorder.

Diagnostically the mental disorders fall into four different classes: 1, delirium; 2, manic-depressive disorders; 3, dementia precox; 4, psychoneuroses (this latter group includes the condition characterized by peculiar fears and dreads). In the group called delirial were 23 women. In 11 of these infection of one kind or another existed, and the tendency was to regard the infection as the cause of the disturbance of the mind. Of these 11 women 8 were primiparae; 3 had previously borne children, without experiencing mental trouble. The mental upset in most of them came within 5 or 6 days after delivery; in one or two thirty days afterwards. Age seemed not to be a factor. In more than one patient recovery did not take place until more than a year had passed, but recovery generally resulted. In 12 of the patients who exhibited delirium (confusion, hallucinations, and muttering, irrelevant talk) no evidences of physical infection were found. Eleven of these were primiparae, and most of them were about 20 years old. Many of these women had poor mental heredity and several of them had been neurotic and unstable, and unhappily situated for one or another reason. Six of the 12 left the hospital still mentally disordered and were lost sight of; of the remaining 6, 3 recovered within a year, two within two years, and one was no better after the lapse of 6 months. There is an intimation that physical exhaustion, general in type, might have been a factor in disturbing the mentality of these 12 post-

partum women, as their physical condition was generally not robust.

The largest number of cases fell in the manic-depressive group. Here there were 36—exactly half the total. The reader will understand that the term manic-depressive includes what were once called the maniacs (excited), and the melancholiacs (depressed). Twenty-seven of the 36 women were depressed, 6 were excited, or maniacal, and 3 were circular, that is, at one time maniacal, and at another melancholy. Of those depressed most had previously borne children and several of them had previously experienced mental disorders. Unhappy environmental circumstances and bad mental heredity were probable causative factors in a number of these patients. Of these 27 women 11 were mentally well within a year; 8 within two years, and 5 were improved after one year. One died of tuberculosis, one committed suicide, and one was no better at the end of 5 months upon leaving the hospital. Six of the women had mania. All of them eventually recovered. Nothing is said of the outcome of the three cases that had so-called circular insanity.

Ten of the patients manifested that type of mental disorder known as dementia precox. Five of these were in age between 30 and 40 years, although dementia precox is supposed to be a mental disease of adolescents. Seven had previously had children. Not a large number of these 10 women had poor mental heredity, but several of them had been peculiar before the insanity developed.

The three psychoneurotics finally reached a tolerable degree of recovery.

These observations would seem to lead to the conclusion that there is no such condition as puerperal insanity; that the postpartum condition may have associated with it one or another kind of mental disease; that infection must not be considered the necessary cause of all mental abnormality during the puerperium; that sometimes the mental trouble does not arise for more than a month after labor; that return to the mental normal is slow after labor; that it must be borne in mind that the puerperal mental disturbance may be permanent—many of the patients do not get well; that the mere fact that one labor has escaped without an ac-

companying mental upset does not mean that the next one will also escape it.

THERAPEUTICS

FREDERICK R. TAYLOR, B.S., M.D., *Editor*
High Point

EPHEDRIN: A NEW DRUG OF MORE THAN ORDINARY INTEREST

Nearly all physicians of experience have been impressed with the dramatic benefits, and occasionally, the dramatic untoward reactions, obtained by the use of epinephrin in many conditions. The very striking relief of a severe attack of bronchial asthma, the equally spectacular disappearance of the phenomena attendant upon a case of serum sickness or other extreme form of urticaria, the occasional life-saving action of the drug in shock, etc., are all familiar enough. However, it must have occurred to all who use the remedy that it is peculiarly unfortunate that a drug with such valuable properties is so evanescent in its action, and that it cannot be successfully used orally. If some substance could be found that possessed even a part of these properties that could be successfully employed by mouth, a great addition would thereby accrue to our list of useful drugs.

Such a preparation appears to have been discovered. In the *Journal of the A. M. A.* for September 11th, the Council on Pharmacy and Chemistry publishes a preliminary report on the drug. According to this report, ephedrin is an alkaloid first obtained by Nagai in 1887 from the Chinese drug *ma huang*, a species of plant. Chemically it is closely related to epinephrin, and the two drugs produce many similar physiologic effects. Still quoting from the council's report, ephedrin is stated to excite the sympathetic nervous system, and to exert a direct depressant action on smooth and cardiac muscle. Its most important effects thus far reported consist in a rather lasting rise in blood pressure on intravenous or intramuscular injection, due mainly to vasoconstriction. It dilates the bronchi and produces mydriasis in much the same way as does epinephrin. It is said to lack styptic action, though applied locally it shrinks swollen turbinates. Perhaps its most useful clinical action is in the treat-

ment of bronchial asthma, as it can be satisfactorily used orally, and seems to produce a more prolonged effect than does epinephrin. The dose recommended for this purpose is 1 grain. No serious untoward actions have been reported, but when given in considerably larger doses than those recommended, 3 out of 20 patients were reported to show nausea, bladder irritation, and headache, which may or may not have been due to the drug.

A number of investigators are studying the action of ephedrin in this country. Perhaps foremost among them is Dr. K. K. Chen, of Madison, Wis. An excellent article appears in the same *Journal* which contains the council report above mentioned, by Dr. Chen and Dr. Carl F. Schmidt, of Philadelphia, entitled "The Action and Clinical Use of Ephedrine." This article is highly recommended to those who wish to gain a fuller knowledge of the drug. The authors recommend that ephedrin be not used in shock, considering epinephrin of more value, as the latter drug is more powerful and lacks the depressant action on cardiac muscle that ephedrin possesses. Ephedrin, according to them, is the most regularly effective and least dangerous respiratory stimulant at our command to counteract the respiratory depression of poisoning by certain narcotic drugs, notably morphin. When used in very large doses Chen and Schmidt report some other untoward effects than those above mentioned, viz., perspiration, chill, palpitation, weakness, dizziness, nervousness, tremor, and epigastric discomfort. No signs of tolerance or of habit formation have been observed by them, but they report insomnia in some patients after taking smaller doses of the drug for several days or weeks. They also report transient albuminuria without damage to kidney function after using ephedrin. The disturbance of blood sugar has so far been reported as slight by Dr. Chen. Experimentally he has noted a rise in the blood sugar of dogs, but he quotes Dr. T. G. Miller to the effect that clinically there is no consistent change in the blood sugar.

The preparations thus far used have been either the sulphate or hydrochlorid of ephedrin. Chen reports that an English house recently sold to this country a considerable quantity of so-called ephedrin hydrochlorid, which was found to lack both the clinical

and some of the physical characteristics of the active ephedrin. According to the council report, the clinical trials which have been reported in this country have been carried out with ephedrin sulphate made in the laboratories of the Peking Union Medical College. The report states that the Abbott Laboratories will shortly be able to supply a salt of ephedrin from this source. Burroughs, Wellcome and Co. now supply ephedrin hydrochlorid for experimental purposes. Eli Lilly and Co. are marketing ephedrin sulphate containing a small amount of "pseudoephedrin" (whatever that may be) under the name "Fedrin."

The council is considering ephedrin and its salts at the present time. The A. M. A. Chemical Laboratory has taken up the establishment of standards for ephedrin hydrochlorid and ephedrin sulphate. The council has postponed the acceptance of ephedrin and its salts to await further evidence, including the establishment of proper methods of standardization. The importance of this is shown by the fact that already reports have appeared, not only of the English firm above referred to, but also an American firm, which has put out a preparation called ephedrin which lacked the true actions of the drug.

BUTESIN PICRATE OINTMENT: A PREPARATION TOO LITTLE APPRECIATED IN SOME LOCALITIES

Many preparations have been used in the treatment of burns. It has long been known that to cover the exposed nerve ends with an ointment or oily substance that protects them from contact with the air gives a measure of relief. This protection reached its highest stage of development in the application of the paraffin spray.

For a good while, the healing virtues of picric acid have been sung by its protagonists, who have claimed a greater rapidity of healing of burns when treated with this substance than when treated by any other method.

For all except the most serious burns, which chiefly concern the surgeon or the undertaker rather than the medical man (no tedious reflection intended!), the most difficult problem has been the adequate control of the pain of burns, despite protective ointments, or even the paraffin spray, which

marked a real therapeutic advance.

Butesin picrate ointment seems to be an almost ideal preparation for the treatment of burns. It is claimed to have whatever healing properties are inherent in picric acid; it is a protecting ointment, and it is said to be a definite local anesthetic.

We have had several opportunities to test the preparation out in practice, and believe the claims made for the preparation to be thoroughly well founded. Recently we suffered a very severe attack of sunburn ourselves, due to overenthusiasm in surf bathing, morning, noon, and afternoon, for a delightful three days at the shore. Nothing obtainable in the neighborhood gave any relief that could be detected, and the editor's shoulders were raw and weeping when he reached home. Butesin picrate ointment was applied at once, and the results were most gratifying. In 10 or 15 minutes the pain had disappeared, and in about four days healing was practically complete. Once before the editor had a similar case of sunburn, many years ago, and he has not yet forgotten the 10 days of suffering that ensued. Patients suffering burns and scalds who have been treated with the preparation have almost without exception praised its analgesic properties, so far as our experience goes. We are surprised that it is not more extensively used in this section of the country, for we believe that it is superior to the paraffin spray for burns of ordinary severity, and certainly it is far simpler and easier to use. At the present time we consider it the treatment *par excellence* for burns of the degree ordinarily seen by the medical man in this part of the country. The preparation is marketed by the Abbott Laboratories, and has been accepted for, and included in, N. N. R. It stains clothing a brilliant yellow, as does picric acid, but the stain is completely removed by ordinary laundering processes.

PHYSIOTHERAPY

For some time we have been impressed with the value, actual and potential, of physiotherapy, or rather, of certain phases of it, notably diathermy.

A good many years ago, electrotherapy in particular, was used chiefly for "psychic effect," and the "psychic effect" was all too often produced on the physician more than

on the patient, and such methods as static electricity, etc., justifiably fell into disrepute. Recently, however, some serious work has been done in this field, and some good results are being obtained. Undoubtedly, as is nearly always the case with new developments, there are many wild enthusiasts in the field who will do the cause harm rather than good. An increasing number of careful, competent, conservative observers are, however, working in the realm of physiotherapy. Recognition of the fact that there is something worth while in this line of work is given by the recent establishment of the A. M. A. Council on Physical Therapy. It is very fortunate that this has been done, for its sane conservatism will be needed in this field just as surely as that of the Council on Pharmacy and Chemistry is needed in drug therapy to weed out the quacks and ultraenthusiasts.

For the past year or more, we have referred a number of our hypertension patients to our friend and colleague, Dr. P. W. Flagge, for physiotherapy—diathermy or autocondensation, as the case might be. The results have in the main been highly gratifying, the usual outcome being rather marked benefit exceeding the benefit produced by diet and drugs. One patient was a total failure, showing an unvarying rise of blood pressure in response to treatment. At the other extreme was an old lady in her eighties, with a pressure of about 230 who, after a couple of months of treatments had her pressure down to 120 systolic. Treatment was discontinued, and in the course of about three months her pressure was up to 170, but one or two treatments at long intervals sufficed to bring down her pressure and keep it within bounds.

Unquestionably diathermy is a great pain reliever. In arthritis, neuritis—notably sciatica—and in a number of other conditions, it may obviate the necessity for narcotics. We have seen it give great relief in very severe nerve root pains due to herpes zoster.

Some very conservative men say that diathermy definitely reduces the mortality from pneumonia. On the other hand, others have been unable to convince themselves of this. As we do not use diathermy, but refer our patients to one more experienced in its use, we have persuaded him to offer to *Southern Medicine and Surgery* a paper he recently read before the Guilford County Medical So-

ciety on physiotherapy in general. We do not agree with quite everything he says, but we do consider him just the type of man who should use physiotherapy—a real student of the subject, a phlegmatic type not given to excessive outbursts of enthusiasm, a man who carries out unbiased observation of his own work, so far as that is possible to anyone. We therefore commend to our readers Dr. Flagge's paper in this issue entitled "Physiotherapy."

LABORATORIES

HARVEY P. BARRET, M.D., *Editor*
Charlotte

EXAMINATION OF BLOOD SMEARS

Of all the microscopical blood examinations probably the most valuable and the one from which more information can be gained is the examination of a stained blood smear. The intelligent examination of a well-stained blood smear will give reliable information on all the cellular elements of the blood and on the coloring matter (hemoglobin) as well. By means of a careful examination of a smear information may be had as to the number, shape, size and staining reactions of the red cells; the number of the leucocytes and the relative numbers of the various kinds present; the presence of nucleated red cells; the amount of hemoglobin and its distribution in the red cells; the number of blood platelets; and the presence of malarial or other parasites.

Blood smears should be made on perfectly clean and dry slides. They should be made evenly, exerting an even pressure over the whole length of the slide. They should be made from a fresh drop of blood, not one that has been allowed to remain on the ear or other site of puncture for even a short time; they should be made, preferably, from the first drop obtained and without exerting any but a minimum of pressure. Smears should be made thinly and spread evenly and as quickly as possible. Smears should be made from a very small drop of blood and spread in such a manner as to leave one or both sides of the smear at some distance from the edges of the slide, so that at least one side of the smear is free for microscopical

examination. Many different stains are in use. In our work we have found Hasting's stain the most useful and the quickest for clean clear-cut staining of red cells, leucocytes and parasites.

The information to be gained from the examination of a blood smear will be mentioned briefly in the following paragraphs:

1. Red cells.

In the various anemias, especially pernicious anemia, a knowledge of the number, shape, size and staining reactions of the red cells is of greatest importance. In any marked anemia there is decided variation in the size of the red cells (anisocytosis). Small cells *microcytes*, and large cells, *macrocytes*, as well as cells of normal size, *normocytes*, are present. Red cells of various shapes, *poikilocytes*, are constantly present in anemia. These poikilocytes should be searched for in the portion of the slide away from the edge as a certain amount of distortion may be present in any slide due to the pressure used in making the smear. Nucleated red cells are not found in a smear of normal blood but are commonly present in anemia, especially in pernicious anemia. Nucleated red cells of normal size are called normoblasts, and the large nucleated cells seen in pernicious anemia are megaloblasts. Megaloblasts are considered by some as diagnostic of pernicious anemia.

Normal red cells take the acid or pink stain when stained by Hasting's or Wright's stain. In various anemias many of the red cells take a bluish pink or purple stain. These cells are usually but not always larger than normal cells. They are known as polychromatic cells and the condition is known as polychromatophilia. Lastly, the presence of malarial or other parasites in the blood is best demonstrated by the smear method.

To sum up: in a properly stained blood smear positive information may be obtained as to:

1. Size of red cells
2. Shape of red cells
3. Staining reaction of red cells
4. Nucleated red cells
5. Parasites.

II. Hemoglobin.

Although it is desirable to estimate the amount of hemoglobin present by one of the standard methods, a fairly accurate idea of

the per cent. of hemoglobin present can be obtained from a careful examination of a stained smear.

The color of the blood as a whole and that of the individual cells is dependent on the amount of hemoglobin present. This holds true in both stained and unstained preparations. In estimating the amount of hemoglobin present, the cells at the edge of the smear should not be considered. Only those portions of the slide where the cells are evenly spread and are not piled up should be examined. Not only can the amount of hemoglobin in the cells as a whole be estimated but the relative amount in the individual cells. The evenness of distribution of hemoglobin in the individual cells is an important point in differentiating between primary and secondary anemias. In secondary anemias, the hemoglobin is generally evenly distributed through the cells as a whole, while in the primary anemias there is a great variation in the amount of hemoglobin in the individual red cells. Some cells are very pale and others deeply stained.

III. Blood platelets.

Many methods of counting the blood platelets have been described. No method is considered standard at present and none is particularly reliable. Estimation of the number of platelets by the stained smear is probably the most satisfactory method at present.

Of course one has to become familiar by practice with the number of platelets seen in a normal smear of blood, and then it is possible to state with a fair degree of accuracy, that the platelets are "normal," "diminished" or "increased." Estimation of the number of platelets is particularly valuable in hemophilia and in pernicious anemia.

IV. The white blood cells.

The count of the relative numbers of the different white cells is the commonest use made of the stained blood smear. Every one is, of course, familiar with the increase in polymorphonuclear neutrophils seen in acute infections, and with the eosinophilia often present in infections with various intestinal parasites.

In spite of the numbers of differential counts made in the acute infections, the writer is of the opinion that far too few differential counts are made routinely when one considers the number of common diseases

in which reliable information may be obtained from such counts. In a future paper the differential counts in some of the commoner diseases will be considered.

UROLOGY

HAMILTON W. McKAY, M.D., *Editor*
Charlotte

THE MANAGEMENT OF STRICTURE OF THE MALE URETHRA

When stricture of the urethra is diagnosed, we usually immediately think of the condition as being a sequela of gonorrhea. This is true in a large per cent of the cases, but that stricture may and often does have other etiological factors, is a well known fact. Trauma in its broad sense, is responsible for entirely too many cases of urethral stricture. To be sure the rough unskillful and inadvisable passage of instruments into the urethra, cannot be too strongly condemned, but this is what is generally considered as trauma to the urethra and will not be further discussed except to say that the passage of instruments into the urethra should always be done under conditions of surgical cleanliness and with the greatest gentleness and skill that the operator possesses. In one of my former articles on "The Management of Acute Gonorrhea" I tried to emphasize the importance of using judgment in the proper time to administer local treatment, and always to use the utmost gentleness in order to avoid trauma. Dr. Edward L. Keys, of New York, writes graphically on this subject, and I take the liberty of quoting from him.

"The cause of gonorrheal stricture is not simply gonorrhea. Indeed, stricture very rarely follows the well treated gonorrhea. The relative frequency of stricture in the clinic, as compared to private practice, is evidence that neglect and trauma of unskillful local treatment, play a large part in its etiology."

Should we only consider the kind of trauma described above as a secondary factor in stricture formation we must admit that the promiscuous use of the hand syringe in the treatment of acute gonorrhea is often an insult to the already intensely and highly inflamed mucous membrane of the urethra,

and, by adding more irritation, is the forerunner of scar formation. Scar tissue in the urethra may also be due to tuberculosis, or, stricture may be congenital, but these etiological factors are relatively infrequent as compared to the causes described above.

If we think of stricture as various shapes and sizes of circular scar tissue, occurring in the urethra, as one of the end results of a severe inflammation which has involved this tube, we will have a better working idea of the pathology. The extent of the cicatrization of the urethra will depend upon the severity of the infection, the amount of additional scarring that is caused by ill-advised and unskillfully administered treatment and the involvement of the urethral glands and surrounding tissue. The calibre of the stricture may vary in extent from a small scar which only reduces the elasticity of the walls of the urethra, interfering little with the passage of urine, on the one hand, to the complete closure of the channel by a dense contracted scar.

Aside from the painful and troublesome symptoms produced by stricture, such as a chronic urethral discharge, dysuria, frequency and burning on urination, together with a sensation of inability to empty the bladder, the more serious results are partial or complete retention of urine, with a possibility of urinary sepsis, followed by its destructive effects on the upper urinary tract.

If we are willing to admit that improper management and trauma produced by misdirected treatment of gonorrhea is responsible for a large percentage of strictures, then, the prevention of stricture should occupy first place in any discussion of the treatment.

To properly prevent stricture we must be able to so control the patient with a chronic urethritis that he will be constantly under observation from the beginning of his urethral infection until such a time as the doctor is not only sure that the patient is free of infection, but that his urethra and whole seminal tract is in as good condition, as it is possible to get it by intelligently directed treatment. Wise and proper instrumentation, including the necessary dilatation of the urethra, either with sounds or a dilator of the Kohlman type, not only removes all doubt about the irradiation of the infection, but prevents small areas of scar tissues, which

sometimes result in a troublesome stricture. The endoscope which enables us to examine the urethra, under direct vision, is probably the most valuable instrument for the treatment of small foci of infection in the urethra, and it is also useful to diagnose stricture of large calibre.

Dilatation is the basis of all palliative treatment of stricture and is done, not with the hope of freeing the patient of the scar in his urethra, but of preventing the scar from contracting beyond a certain point. The proper management and skillful dilatation of a stricture of small calibre complicated by partial or complete retention of urine, is one of the most difficult problems which confront the urologist. If the following technique is observed in all cases of stricture of small calibre, we can often make a difficult procedure easy and save our patient from great discomfort and many complications.

Place the patient on a rigid table of the proper length and height, so that he will be as comfortable as possible, and the operator will not be in an awkward position,—as is the case with the passage of an instrument into the patient's urethra who is lying in a low sagging hospital bed. To try to dilate a stricture of small calibre under unfavorable conditions as above described is useless and often harmful to the patient. I am satisfied that not enough importance is paid to seeing that the patient is in a comfortable position where the operator can work under the best surroundings.

Rigid asepsis of all instruments and surgical antisepsis of the field of operation is absolutely essential. Thorough anesthesia of the urethra brought about with a 5 per cent or 10 per cent solution of novocaine, or a 2 per cent solution of cocaine, is absolutely essential to obtain the best result. I prefer 2 per cent cocaine if the urethra has not been traumatized.

There are three essentials which the genito-

urinary surgeon must possess to do successful instrumentation of a urethra. They are as follows:

1. Absolute gentleness
2. Great patience
3. Abundant lubrication.

If the above points in regard to the technique of the preparation of the patient and his position are given proper consideration, and the operator will remember to be gentle and patient, and abundantly lubricate the urethra, many difficult strictures of small calibre can be dilated that would otherwise come to operation.

The actual technique of the manipulation of a filiform through the face of a tight stricture should always be regarded as a delicate procedure and one fraught with many dangers unless absolute gentleness is practiced at all times. When a filiform bougie is once passed beyond the stricture and into the bladder, usually our greatest task is complete, because the filiform can either be tied in place, which will serve as a capillary drain and a guide over which followers can be passed immediately or at some future time in order to further dilate the stricture. Patients with small calibre stricture should be placed in the hospital from the beginning and treated with the idea of preventing urinary sepsis.

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CASE REPORTS

ILLUSTRATING THE RANGE AND STRAIN OF THE GENERAL PRACTITIONER'S WORK

By
A. C. EVERETT, M.D.
Rockingham

Case No. 1, Obstetrical: Mrs. W., age about 40, white, 12 para, 20 miles from town, home one-room log cabin, time 3 a. m., April, 1925.

Examination. Found left arm presenting, several hours duration. Had no time to get help and when I informed the curious spectators what had to be done everybody left except the midwife and the husband. Put patient on kitchen table, gave anesthetic, scrubbed up, turned anesthetic over to husband with instructions and proceeded to do version. When delivery was completed found cord had been torn apart. Upon inquiry midwife informed me that the cord was the first thing presented and it "came off." Of course she pulled it off. Baby dead. Uneventful recovery.

Case No. 2, Gangrene following abortion: June, 1925, Mrs. P., age about 35, white, mother of several children. Had abortion about three weeks before I saw her, when she was having profuse flowing. Could feel no pulse. Advised curettage which was refused. In about a week curettage was consented to. After curettage hemorrhage stopped. In three or four days both feet began to change color. Took her to hospital; blood transfusions given, followed by amputation of both feet midway between ankle and knee. I have been unable to find anything in literature in regard to gangrene following loss of blood. Examinations of blood and urine afforded no clues.

Case No. 3, 11½-year-old primipara: Was called April 5, 1926. According to family Bible patient was born Oct. 1, 1914, therefore about 11½ years old. Patient was found out in garden in convulsions about 10 a. m. I saw her about an hour later. Still having

convulsions. Unconscious all morning. Treatment. Withdrew 1 pint blood. Gave hypo. 20 drops Tr. Veratrum Viride. One tablet H. M. C. Delivery 6 p. m. 8½ lb. baby. Uneventful recovery.

PRE-ECLAMPTIC TOXEMIA WITH THE USE OF MAGNESIUM SULPHATE INTRAVENOUSLY

By
PARKS M. KING, M.D., and T. PRESTON WHITE, M.D.
Charlotte

Patient Mrs. J. O. W., age 23, primipara. First seen in January, 1926. At that time her physical examination was entirely negative. Measurements normal. Blood pressure 120/80, urinalysis negative. Date of expected confinement Sept. 4, 1926.

From January until August 16th her physical condition was excellent. Blood pressure remained around 120/80, repeated examinations of urine negative. Occasionally there was slight edema of feet and ankles that promptly cleared up after rest in bed.

On August 16th—two weeks before delivery—patient complained of some headache. Her blood pressure was 144/94, and her urine showed a faint trace of albumin. She was put to bed on a light diet and fluids forced. The following day her blood pressure was 134/90. 8-24-26: headache more severe, much edema of the feet and ankles, some impairment of vision, blood pressure 148/94, urine showed a decided trace of albumin. 8-25-26: Above symptoms increased in intensity, blood pressure 165/95. She was put to bed again on a liquid, salt free diet. There was no improvement and she was removed to the hospital on 8-27-26. The vision was more impaired, edema of feet and ankles increased and severe headache with nausea, vomiting and restlessness. At 8 p. m. blood pressure 180/125. 20 c.c. of 10 per cent solution of magnesium sulphate was administered intravenously—(very slowly). By 12 o'clock midnight there was definite relief of symptoms and her blood pressure 158/80.

On August 28th her blood pressure fluctuated between 168/100 and 150/95 with headache increasing. Previous to administration of the magnesium sulphate, urine had been very scanty. In the twenty-four hours following magnesium sulphate, 76 oz. of urine were excreted. This increased urinary output continued.

8-29-26: 2 a. m. 20 c.c. of magnesium sulphate intravenously repeated. Again the general condition of the patient improved and blood pressure went down to 144/90. At 10 p. m. same day as a prophylactic measure the

magnesium sulphate was repeated.

Infrequent labor pains began during the night of the 28th, and became more regular during the night of 8-29-26. A normal 7 lb. female child was delivered at 8 o'clock of the morning of the 30th. Forceps were used only to hurry up the delivery. General condition of the mother good. Relief from the above symptoms promptly followed.

Patient was seen Sept. 22nd, at which time her blood pressure was normal and her vision nearly entirely returned.

CORRESPONDENCE

BUNCOMBE COUNTY MEDICAL SOCIETY

Asheville, N. C., Sept. 23, 1926.

Dear Dr. Northington:

I am pleased to acknowledge the receipt of your letter of the 15th instant and wish to thank you for your most generous offer. It will give me much pleasure to cooperate with you and *Southern Medicine and Surgery* in any way possible and I will be glad to forward to you from time to time happenings in the medical life of our society.

We had yesterday the semi-annual meeting of the Tenth District. A program of this meeting is herein enclosed. This meeting was a splendid one in every way and many doctors there spoke of the benefit they had derived from it, what a good attendance, etc. I also enclose a short newspaper clipping of the meeting.

Asheville, as you know, is a fine place in which to live and for that reason I think there is a larger proportion of doctors to the population than any other place in the State. We have had ten new men here in the past two months. I am enclosing a list of them, some of which have not affiliated with the local society as yet.

September 6, we lost through death one of our most active and valuable members, Dr. W. J. Hunnicutt. A copy of resolutions passed is also enclosed.

Again thanking you for your kind offer and hoping I can serve you further at any time, I am,

Very truly,

M. S. BROUN,
Secretary.

CUMBERLAND COUNTY MEDICAL SOCIETY

Fayetteville, N. C., Sept. 21, 1926.

Dear Dr. Northington:

As secretary of the Cumberland County Medical Society I shall be glad to send you current monthly events of interest to the medical men in general.

I believe we have the best County Society in the State, both in attendance and in the scientific preparation and discussions of papers.

At our last meeting held September 14th. Dr. Robert Malcolm, recently returned from several years in the Orient, gave a very fine paper on tropical diseases and their treatment. He also told of the wonderful work being done by the U. S. Government in eradicating disease in certain of the islands.

I shall be glad to forward monthly all local happenings of interest.

Yours fraternally,

O. L. McFADYEN,
Secretary.

Sketch of Highsmith Hospital

JOHN Q. MYERS, M.D., Charlotte

In 1899 Dr. Jacob Franklin Highsmith (now Fellow American College of Surgeons) was inspired by necessity to establish a hospital at Fayetteville for the care of his patients and did build and begin operating that year the first private hospital in North Carolina. His success has been marvelous. His fame as surgeon, doctor and teacher of nurses has spread all over the South. And now as a crowning achievement and monument there stands on Haymont Hill the New Highsmith Hospital, an imposing fireproof structure beautifully located and splendidly equipped for service to afflicted and diseased man. The man who has here the concrete realization of the dream that was his when in 1899 he established in Fayetteville the first private hospital in North Carolina, says that his purpose was to build an institution for service to humanity, and that he has succeeded admirably is amply evidenced in every minute detail from entrance to solarium; from roof garden to immense basement where there is room and to spare for three large boilers, an incinerator, laundry equipment, and a refrigerating plant where ice is made and from which ice water is conveyed in pipes to drinking fountains on each of the five stories above.

As stated, it is set upon a hill, beautiful for location, on a three-acre lot. The building is in the shape of an "X," two wings extending from the center and leaving ample space to double the capacity by the addition of two other wings. Its exterior is of air-dale brick, with granite trimmings, making a most imposing and pleasing appearance.

Inside the building, making a tour of its five stories and basement, one marvels at the simplicity and convenience of its arrangement and the completeness of its equipment. Each room is an outside room, light and airy, with furnishings in restful soft green, tan and walnut colors, and giving a fair view of hills and valleys that in itself is health-inspiring.

The main entrance leads into a reception hall, beautifully furnished in a home-like manner. This floor is devoted to the diagnostic examination of patients, business office and doctors' offices. Also on this floor

is the doctors' private library, of easy access to internes' and residents' living quarters. Each physician's suite contains an office, physical examination room, dressing room, lavatory and toilet, and attractive waiting room.

The x-ray, including the deep therapy machine, is on the diagnostic floor directly connected with the urological department.

There are two main operating rooms with all modern and up-to-date equipment on the third floor which is the mid-wing of the building and equally accessible to the whole building. On the main floor there is an emergency operating room to take care of emergencies and accidents in addition to the two main operating rooms.

On each floor there is a surgical dressing room with steam sterilizer in each to take care of the surgical dressings on each floor.

There is a complete hydro-therapeutic apparatus, including cabinet and spray baths, located on the ground floor, and President Coolidge hasn't got a thing on this hospital in the way of equipment for exercise, for an electric horse is here to be put through his paces. Also on this floor is the clinical laboratory which is equipped to make all kinds of tests from blood chemistry to tissue examination.

On the first floor are the wards for both white and colored; each patient in the wards, as well as in the private rooms, has her or his own closet and bedpan. There are bedpan sterilizers on each corridor so arranged that each utensil coming into contact with a patient is sterilized each time it is used, each ward also having lavatories with hot and cold water.

The large kitchen on this floor is equipped with every modern equipment, with arrangements for serving nurses cafeteria style and of easy access to dining rooms, one of them a most attractive room for the physicians connected with the hospital. There is a modern electric dumb waiter which conveys the patients' trays to the different floors. A touch of the poetic, reminiscent of the late Charles McNeill, will be revealed in the china, each piece of which reveals a wreath

of longleaf pine surrounding a pine burr and bearing the monogram "H. H."

There is a cafeteria for the accommodation of visitors, and rooms for friends or relatives of patients who desire them.

Each room is equipped with a metal adjustable bed and a silent call system, and the nurse who sits at a table in the center of each floor can see the light as it flashes over every door. There is also an electric silent signal system for the doctors of the institution, which is controlled by the telephone operator on the main floor.

There are sun parlors on every patients' floor. Rooms are so arranged that beds may be wheeled through their wide doors and on to the electric self-adjusting elevators and carried to the spacious roof garden.

The floors are of rubber and duraflex, and all bath-rooms are of tile and marble. The vapor system of heating is used and is controlled by both high and low pressure steam. The system is adequate to furnish ample heat to the four-story nurses home, which is adjacent to the hospital.

The nurses home, just a few steps from the hospital, is an attractive four-story building which is completely equipped with teaching department, rest rooms, and bath equipment on every floor.

The new Highsmith Hospital is a Class "A" institution and has been so classified by the American College of Surgeons since 1910.

There are many nurses all over the country who were trained under Dr. Highsmith. He is justly proud of this splendid new hospital, into which he has incorporated the fruits of his long years of labor and experience and the best that science has worked out for an institution for ministering to humanity.

Ideally located and splendidly equipped, the New Highsmith Hospital certainly impressed the visitor as the last word in facilities for ministering to suffering humanity, and I bid Dr. Highsmith and his associates God's continued pleasure in the successful service to humanity and commend them to those who say a private hospital cannot succeed.

NEWS NOTES

THE NINTH DISTRICT MEDICAL SOCIETY met in Mocksville on October 7. The following programme was rendered:

"Physiotherapy in Surgery with an Analysis of One Hundred Cases," by Dr. G. Carlyle Cook, Winston-Salem; "The Value of Blood Chemistry in Everyday Work," Dr. William Allan, Charlotte; "The General Practitioner and the Child with squint," Dr. V. K. Hart, Statesville; "Complications of Tonsillectomy," Dr. E. B. Clement, Salisbury; "Intravenous Medication in Genito-Urinary Diseases," Dr. Frank A. Ellis, Salisbury; "The Surgical Treatment of Duodenal Ulcer," Dr. W. H. Spraut, Jr., Winston-Salem; "He asked for Bread"—"He Gave Him a Scorpion," Dr. C. Banks McNairy, Lenoir; "The Uses of Radium and Its Contra-Indication," Dr. Douglas P. Murphy, Rutherfordton; "X-ray Treatment of Blood Dyscrasias," Dr. J. Rush Shull, Charlotte; "Some Case Studies of Negro Criminals in North Carolina," Prof. J. F. Steiner, University of N. C., Chapel Hill; "Crime as a Manifestation of Mental Un-

soundness," Dr. James K. Hall, Richmond, Va.; "Mental Disorder and the Criminal Law," Hon. W. M. Hendren, Winston-Salem, and a short talk by Dr. J. Q. Myers, Charlotte, president of the North Carolina Medical Society.

A delicious barbecue dinner was served at one. Dr. A. B. Byerly, Cooleemee, was elected *president*; Dr. C. Banks McNairy, Lenoir, *vice-president*; and Dr. J. W. Davis, Statesville, re-elected *secretary*. The officers under whose regime this meeting was held were: Dr. J. R. Terry, Lexington, *president*; Dr. A. B. Byerly, Cooleemee, *vice-president*; and the *secretary* who continues in office. The *councilor* in charge of the district is Dr. M. R. Adams, Statesville.

THE TENTH DISTRICT MEDICAL SOCIETY held its annual meeting at Sylva, on September 22nd. An excellent programme was carried out amid every evidence of enthusiasm for medical progress. Among the members presenting essays or engaging in discussion

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were: Drs. Guy E. Dixon and R. Z. Query, Hendersonville; J. R. McCracken and J. F. Abel, Waynesville; T. J. Summey, Brevard; J. N. Hill, Murphy; C. Z. Candler, Sylva; J. M. Russell, Canton; and A. C. McCall, J. Y. Malone, R. R. Ivey, A. L. Denchfield, C. C. Orr, C. S. Norburn, R. A. White and L. W. Elias, Asheville.

A feature of unusual grace and appropriateness was the conferring on Mrs. E. B. Glenn, of Asheville, an honorary membership for life.

Dr. John Q. Myers, of Charlotte, president of the Medical Society of the State, made an address on the new programme of the State Board of Health.

Dr. Chas. Z. Candler, Sylva, was elected *president*; Drs. Jas. G. Anderson, Asheville, Thomas F. Reynolds, Canton, Wm. C. Morrow, Andrews, and D. R. Bryson, Bryson City, *vice-presidents*; and D. M. McIntosh, Old Fort, *secretary*.

THE EIGHTH DISTRICT MEDICAL SOCIETY will meet in Greensboro on November 4th. Dr. W. C. Ashworth is *president* and Dr. D. W. Holt, *secretary*, both of Greensboro.

THE SEVENTH DISTRICT MEDICAL SOCIETY held its annual meeting at Cleveland Springs, Shelby, on October the 12th. Among those reading essays were: Drs. Thos. B. Mitchell, Lincolnton; Wm. Allan, A. A. Barron, J. R. Irwin, C. N. Peeler, J. P. Kennedy, R. T. Ferguson and J. R. Alexander, Charlotte; Reuben McBrayer, Shelby; H. D. Stewart, Monroe; E. B. Lattimore, Shelby; D. P. Murphy, Rutherfordton, and Chas. I. Allen, Wadesboro.

Dr. Roderick R. Janson, a guest of Dr. Sam Schenck, who will be located in Seattle, Washington, contributed to the discussion of the rationale and usefulness of physiotherapy.

Dr. E. B. Lattimore, Shelby, was chosen *president*, succeeding Dr. Chas. H. Pugh, Gastonia; Dr. R. H. Crawford, Rutherfordton, *vice-president*; while the *secretary*, Dr. Raymond Thompson, Charlotte, continues in office.

DR. J. M. ALLHANDS, of Cliffside, sends in the following:

The Rutherford County Medical Society

met in its regular monthly meeting on Tuesday, October 5th, at the Iso-Thermal Hotel. A luncheon was given in honor of the staff of the Rutherford Hospital.

Dr. William Allan, of Charlotte, delivered an excellent address on Angina Pectoris. Dr. James M. Northington, editor Southern Medicine and Surgery, of Charlotte, made a splendid address on the practicability of medical literature that was fitted to the needs of the every-day practitioner.

Dr. Nafey, of Middlesex County, N. J., having the distinction of the first medical society in the United States, addressed the society. In his address he took occasion to compliment the unusual professional interest of the society, and its splendid attendance.

The meeting was well attended, as all of them are, and was a very profitable and interesting one.

The members of the society present were: Drs. C. F. Gold, R. Hicks, J. M. Allhands, C. T. Lovelace, Perry Wiseman, L. B. Harrill, W. C. Bostic, W. A. Thompson, Robt. H. Crawford, D. P. Murphy, J. F. Hunt, W. F. W. Logan and A. A. Rucker.

THE MECKLENBURG COUNTY MEDICAL SOCIETY held its regular semi-monthly meeting on the evening of October fifth. Dr. R. L. Gibbon paid an elaborate tribute to "Dr. I. W. Faison and his influence on Medicine in Charlotte." A great number of the members contributed their good words to the discussion. Prof. J. Frazer Hood, of Davidson, recently returned from a many months' stay in Europe, addressed the meeting on "Psychology in its Application to Therapeutics." Members taking part in the discussion expressed their pleasure at the bringing together of psychologist and physician for exchange of points of view.

RECENTLY LOCATED IN ASHEVILLE are: Drs. G. W. Murphy, Chas. A. Hensley, David Kimberley, L. L. Williams, Milton Hahn, G. A. Mears and K. E. Montgomery. Drs. R. G. Wilson and A. C. Thompson have in the past few months returned for the practice of what may be called briefly, the *head specialties*.

DR. H. S. BELT, of South Boston, Virginia, member of the Executive Council of the Tri-

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BERNARD L. PETERSON

Technician Serology Department
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State Medical Association and prominent surgeon, died on the tenth at his private hospital. Dr. Belt had been active till within twenty-four hours of his end, which is attributed to heart disease.

DR. W. W. FENNELL, ex-president of the Tri-State Medical Association and a prominent surgeon of Rock Hill, S. C., died at his home on October 11th.

DR. CYRIL VON BAUMANN has opened offices at the Chick Springs Sanitarium and Health Resort, Taylor, S. C., for the practice of physiotherapy, including electrical, mechanical, hydrotherapeutic measures and surgical diathermy.

DR. FRANK HOWARD RICHARDSON, of Brooklyn, N. Y., and Black Mountain, N. C., addressed the Parent-Teachers Association of Charlotte on the evening of October the eighth, in the interest of the movement for a shorter school day for certain classes. Dr. Richardson is a writer of note on the diseases of children and one of his avenues of expression is *Southern Medicine and Surgery*, of which he is Editor of the Department of

Pediatrics.

DR. OREN MOORE, of Charlotte, addressed the Cumberland County Medical Society in September, his subject being "Obstetric Complications."

DR. JOHN ALEXANDER MCKETHAN, of Fayetteville, died at his home on September the 10th. Dr. McKethan was graduated from the North Carolina Medical College in 1901 and licensed in North Carolina in 1903.

DR. T. E. TUCKER, Health Officer of Edgecomb County, has resigned, effective October 15th, to accept the same office for Jackson County, Alabama, with headquarters at Scottsboro.

DR. EDWARD J. WOOD, Wilmington, sailed late in September for two or three months in London.

DR. H. H. FOSTER, of Norlina, was elected *president* of the Warren County Medical Society, at a regular meeting held on October the 12th.

MISCELLANY

PATERNALISM DANGEROUS

W. W. DAWSON, M.D., Grifton, N. C.

(Excerpts from an address to the Annual Convention of County Commissioners of North Carolina at Wrightsville Beach, August, 1926.)

If you will permit me, I wish to call your attention very briefly to two conditions which confront us as an integral part of the governing power of the nation, and which to my mind presents the gravest problems that confront us as a people. I refer to paternalism and debt. No civilized country in the world is entirely free from the plague of paternalism. We as a nation are more free from it than the European people of the day, but it is rapidly gripping us, and it is always an enervating influence. It never does more to sap the virility of a people than when backed by organized effort to make the ef-

fectives carry the ineffectives; to force the thrifty and industrious to provide for the shiftless and idle and compel those who have achieved moderate success by living useful lives to carry the burdens of the lame ducks and human misfits. Work becomes an agony to those who have been paid for loafing, and "I should worry," becomes the motto of these beneficiaries. Examples of this kind of paternalism are the Doles System in England and the subvention of mismanaged industries here and abroad. The sick, the maimed, and the unfortunate, civilization has been accustomed to care for and make the best of it; but those who are now clamoring for preferential treatment and who constitute such a grave problem when backed by laws being asked for, are for the most part able bodied, hard working, industrious people, who lack the judgment or method that brings success, and when failure comes

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expect the government to step in and make their particular business a success at the expense of the whole people. Even the old age pensions being provided, when not actually earned by those who are to receive them, take away some of the God-given impetus for endeavor with which all men are endowed. We, who handle the finances of the counties of the State, should be very careful how we expend in charity the moneys provided, lest by improper use of these means, we encourage reliance upon governmental support for some of those things which should be earned by individual effort.

The last few years have been a period of greatly increased indebtedness, until now our entire indebtedness as a nation, individually, corporately, and governmentally, has reached the staggering sum of one hundred and twenty-two billion dollars, almost 40 per cent of the entire worth of the nation; the number of debtors increasing and the number of creditors decreasing as time passes. These figures were gathered by government bureaus in Washington and compiled by Helm. They are conservative. The amount that we owe has almost reached the danger point as will be shown by the following explanation:

Out of every dollar earned in the United States it takes seventy cents for living (food, shelter, clothing, etc.); eleven and one-half cents for taxes, direct and indirect; sixteen cents for interest partial payments, leaving only two and one-half cents for possible savings.

To remedy this condition we are faced by one of three alternatives, lower our standard of living, reduce our taxes, or earn more. To the first of these none of us will agree; as to the second our taxes are increasing, and the third is problematical.

To these two conditions, paternalism and debt, I merely wish to call your attention in passing as things to keep in mind during our regular routine of business in order that we may think before acting.

FIRST PHYSICIANS' HISTORY WRITTEN BY PHYSICIANS TO BE PUBLISHED

What is said to be the first comprehensive history of the activities of the medical profession, as distinguished from a history of medicine, from the earliest times to the pres-

ent day, a work as broad in its outline of the subject as H. G. Wells' "Outlines of History" and of which many chapters have been contributed by eminent physicians themselves, is about to be published through the efforts of the Physicians Home, Inc., the headquarters of which are in the Times Building, New York City.

This announcement has been made by Charles Capehart, who is directing the campaign of the home for a \$2,000,000 endowment fund, and who outlined the scope of the work which, under the title of "A History of the Physician," is in five parts and is being edited by Arthur Selwyn-Brown, B.Sc., M.A., Ph.D., LL.D., whose previous literary efforts and wide experience in the fields of science and exploration in behalf of the British government have, it is felt, peculiarly fitted him for the ambitious task.

"Primitive Man; hundreds of thousands of years ago was attended in his sickness by men who were expert in medicine," declares Dr. Brown. "Recent studies of the cave bones discovered in Europe show that fractures were well set and that many surgical operations were carried out by the surgeons of the Stone Age."

No works about physicians have up to now been written like those of Plutarch, dealing with the lives of distinguished personages in classical times, nothing like "Smiles," "Lives of the Engineers," nor books corresponding to those of Ruskin on the work of artists and architects, nor biographical studies like those of Lords Campbell and Birkenhead on the great jurists of England. "The History of the Physician" is intended to remedy the omission and to trace the history of the doctors' labors from the remotest times to the present, so as to show how the basic principles of modern medical science were established, not in one age or country but by the co-operation of medical men in all parts of the world patiently laboring over long periods of time.

"A History of the Physician" is to contain biographies of outstanding practitioners since classical times as well as of prominent American physicians of the past century and one of the most important features of the work is a series of sketches, contributed by recognized contemporary authorities in the several lines, of the men who have aided most

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Dr. Brown acknowledges the co-operation he has received from the profession and states that every member consulted has expressed his hope that the book may prove invaluable to all interested in the physician and serve as a text book for students who are desirous of studying the history of medicine and tracing its evolution. It is believed that its subject matter will not alone prove of intense and fascinating interest to the layman, whom it will afford a new concept of the physician's struggles, sufferings, sacrifices in the cause of humanity, triumphs and rewards.

It is announced by Mr. Capehart that the proceeds from subscriptions for "A History of the Physicians" are to be devoted to increasing the endowment fund for the Physicians' Home and that several large subscriptions for copies of the work, the edition of which is to be limited, have already been received from wealthy persons. The nominal price placed on the book is \$15, but several persons have subscribed sums as large as \$500 for it.

An idea of the wide scope of the several volumes is given in the advance table of contents which is as follows:

Book I contains Chapters on Primitive Medicine and the Medicine Man; Sumerian, Babylonian and early Oriental Physicians; The Physicians of Egypt, the specialists and dentists; Minoan and Greek Medical practises before Hippocrates; Medicine in the Greek classical period (460-136 B.C.); Medical men in the late Greek and Roman Times; Byzantine Physicians (476-732 A.D.); Medical Practises of the Arabs and Moors introduced into Europe through Spain. (732-1096 A.D.); The Medieval Physician; Medical Practises during the Renaissance and Reformation (1453-1600 A.D.); Physicians the Seventeenth, Eighteenth and Twentieth Centuries; with special chapters on "The trials and tribulations of the Country Doctor," "The Physicians' Home Fund, Inc., and its Institutions," and "Specialization among Modern Medical Men; the Physician of the Future."

Book II is devoted to "Lives of Great Physicians," throughout historical times.

In Book III, "Physicians who have con-

tributed to Modern Specialization in Medicine" are given due credit.

Book IV treats of The Doctor and Hospitals, The Missionary Doctor, Doctor and Public Health, Doctor and State, The Re-establishment of Hospitals and Medical Service after the Dark Ages, The Doctor in Literature, Science, etc.

In Book V is recorded the exploits of "Distinguished American Physicians" in twenty chapters.—*From The Physicians' Home, Inc., Times Building, New York City.*

THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

The Symposium on Cancer Control held at Lake Mohonk, N. Y., September 20-24.

Among the noted European specialists present were: Dr. Raffaele Bastianelli, professor of Surgery at the University of Rome; Dr. Leon Berard, professor of Surgery at the University of Lyons; Sir John Bland-Sutton, Bt., president of the Royal College of Surgeons, vice-chairman of the British Empire Cancer Campaign; Dr. Ferdinand Blumenthal, professor of Internal Medicine at the University of Berlin; Dr. William deVries, president of the Netherlands Cancer Institute, Amsterdam, professor of Pathologic Anatomy at the University of Amsterdam; Dr. Henri Hartmann, professor of Surgery at the University of Paris; Dr. J. Maisin, professor at the University of Louvain; Dr. James A. Murray, director of the Imperial Cancer Research Fund, London; Dr. Claude Regaud, director of the Pasteur Laboratory of the Radium Institute, Paris; Dr. Albert Reverdin, general secretary to the Anti-Cancer Center of Geneva.

Among the Americans were: Dr. Howard Canning Taylor, professor of Clinical Gynecology at Columbia, president; Dr. Francis Carter Wood, director of the Institute for Cancer Research, Columbia, vice-president; and Dr. George A. Soper, managing director of the American Society for the Control of Cancer; Dr. Robert B. Greenough, member of the Harvard Cancer Commission and director of the Huntington Memorial Hospital, Boston; Dr. James Ewing, professor of Pathology, Cornell Medical College, and director of the Memorial Hospital, New York; Dr. Charles Mayo, Rochester, Minnesota; Dr. Joseph Colt Bloodgood, associate pro-

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fessor of Clinical Surgery at Johns Hopkins University; Dr. William H. Welch, director of the Institute of Hygiene and Public Health, Johns Hopkins University; Dr. Burton J. Lee, Dr. George H. Semken, Dr. Willy Meyer, Dr. Isaac Levin, Dr. Shelton Horsley of Richmond, Dr. Alson R. Kilgore of San Francisco, Dr. Alexander Primrose of Canada, Miss Maud Slye of Chicago, and Dr. Erwin Smith of Washington.

Two resolutions were passed, after careful consideration by a committee and discussion before the whole gathering. One was a proposition to form an international federation in order to bring about more meetings like the Mohonk symposium and publish in at least three languages an index and abstracts of all papers on cancer which appeared anywhere in the world. By resolution this proposition was referred to the many national societies against cancer, with a recommendation that the plan, or one similar to it, be adopted, if, upon further study, means could be found for defraying the cost of the work.

"The great note struck at the Mohonk symposium," declared Dr. Welch, "was the tremendous importance of the cancer question and the appalling problems which it presents. There was never a time when tuberculosis presented problems of such magnitude. The general public and the medical profession must be aroused to the vital importance of efforts to control cancer. However inadequate our knowledge is today, it is an obligation of the profession to the general community that every effort be made to control this scourge."

Statement of the Facts and Opinions Agreed to by the Meeting:

Although the present state of knowledge of cancer is not sufficient to permit of the formulation of such procedures for the suppression of this malady as have been successfully employed for the control of infectious diseases, there is enough well established fact and sound working opinion concerning the prevention, diagnosis and treatment of cancer to save many lives, if this information is carried properly into effect.

1. The causation of cancer is not completely understood, but it may be accepted that for all practical purposes cancer is not

to be looked upon as contagious or infectious.

2. Cancer itself is not hereditary, although a certain predisposition or susceptibility to cancer is apparently transmissible through inheritance. This does not signify that, because one's parent or parents or other members of the family have suffered from cancer, cancer will necessarily appear in other persons of the same or succeeding generation.

3. The control of cancer, so far as this subject can be understood at the present time, depends upon the employment of measures of personal hygiene and certain preventive and curative measures, the success of which depends upon the intelligent co-operation of the patient and physician.

4. Persons who have cancer must apply to competent physicians at a sufficiently early stage in the disease, in order to have a fair chance of cure. This applies to all forms of cancer. In some forms early treatment affords the only possibility of cure.

5. Cancer in some parts of the body can be discovered in a very early stage, and if these cases are treated properly the prospect for a permanent cure is good.

6. The cure of cancer depends upon discovering the growth before it has done irreparable injury to a vital part of the body and before it has spread to other parts. Therefore, efforts should be made to improve the methods of diagnosis in these various locations and the treatment of the cancers so discovered.

7. The public must be taught the earliest danger signals of cancer which can be recognized by persons without a special knowledge of the subject, and induced to seek competent medical attention when any of these indications are believed to be present.

8. Practitioners of medicine must keep abreast of the latest advances in the knowledge of cancer in order to diagnose as many as possible of the cases of cancer which come to them.

9. Surgeons and radiologists must make constant progress in the refined methods of technic which are necessary for the diagnosis and proper treatment not only of ordinary cases but of the more obscure and difficult ones.

10. There is much that medical men can do in the prevention of cancer, in the detection of early cases, in the referring of pa-

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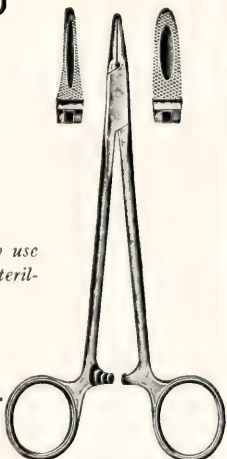
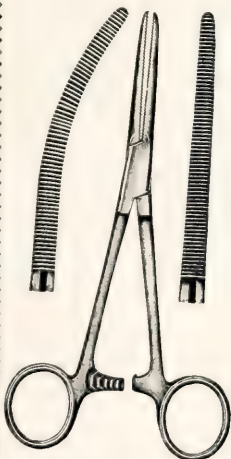
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tients to institutions and physicians who can make the proper diagnosis and apply proper treatment, when the physicians themselves are unable to accomplish these results. The more efficient the family doctor is, the more ready he is to share responsibility with a specialist.

11. Dentists can help in the control of cancer by informing themselves about the advances in the knowledge of the causes of cancer, especially with relation to the irritations produced by imperfect teeth and improperly fitting dental plates. They can also help by referring cases of cancer which they discover to physicians skilled in the treatment of cancer in this location. It may be doubted whether all dentists fully realize the help which can be obtained from x-ray photographs in revealing not only the state of the teeth but the condition of the bone surrounding them.

12. Medical students should be instructed in cancer by the aid of actual demonstrations

of cancer patients, and this to a sufficient extent to give them a good working knowledge of the subject.

13. The most reliable forms of treatment, and, in fact, the only ones thus far justified by experience and observation, depend upon surgery, radium and x-rays.

14. Emphasis should be placed upon the value of the dissemination of the definite, useful and practical knowledge about cancer, and this knowledge should not be confused nor hidden by what is merely theoretical and experimental.

15. Efforts toward the control of cancer should be made in two principal directions: (1) the promotion of research in order to increase the existing knowledge of the subject, and (2) the practical employment of the information which is at hand. Even with our present knowledge many lives could be saved which are sacrificed by unnecessary delay.

REVIEW OF RECENT BOOKS

Post Mortems: Two, MERE MORTALS, Medico-Historical Essays, by C. MacLaurin, M.B.C.M., F.R.C.S.E., Hon. Deg. Padua, Lately Lecturer in Clinical Surgery, the University of Sydney; Late Consulting Surgeon, Royal Prince Alfred Hospital, Sydney; Late Honorary Surgeon, Royal Hospital for Women, Sydney. New York, George H. Doran Company.

This (the second) group of this surgeon's medico-historical essays, is as absorbingly interesting as the first. The copy coming to this journal for review proved so attractive to one reader who accidentally came upon it, that he has enthusiastically passed it on, and the copy being reviewed is another borrowed for the purpose.

In the preface there is a pithy expression which is pertinent and important. The author notes that some reviewers have complained of too much "medical jargon." He doubts the existence of such a thing, points it out that, with the help of a modern dictionary, it should be reasonably understandable; and then comments: "There is the filthy jargon which insists on saying 'the red plague,' when we mean syphilis; or 'in a certain interesting condition' when we mean to

say 'pregnant.'" Throughout, the book is frank, but "without suspicion of coarseness."

The author has made *post-mortem* examinations into the intimate histories of such celebrated persons as Samuel Johnson, Martin Luther, Queen Elizabeth, Frederick the Great, Nietzsche, Schopenhauer and Spinoza; and notorious ones, as Ivan the Terrible, and Charles the Second; along with some in-betweens, as Henry Fielding and James the First. There is a section on the children's crusade and another on Some Epidemics of Social Importance.

Much evidence is adduced to show that, in all likelihood, all these characters were decidedly diseased in body, in mind or in both, and that disease supplies explanations for many of their acts which have so profoundly influenced the course of events of the very first importance.

The book is a rare treat, being a record of scientific research and logical reasoning, expressed in exceptionally happily chosen English.

PRACTICAL DIETETICS for Adults and Children in Health and Disease, by Sanford Blum, A.B.,

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M.S., M.D., Head of Department of Pediatrics, and Director of the Research Laboratory, San Francisco Polyclinic and Post Graduate School. Second Revised Edition. Philadelphia, F. A. Davis Company, Publishers, 1926. \$4.00.

In the past ten years the discovery of the existence of vitamins and the elaboration of insulin have greatly revised our ideas on diet. The author recognizes these as events of importance, but well states that insulin has not done away with the necessity for dietetic treatment of diabetes.

It looks as though the list of foods to be "avoided" by the normal adult contains a disproportionate number of things good to eat; but maybe that's innate depravity.

Type meals are outlined for practically every condition from anemia to vomiting of pregnancy. The general principles involved are briefly described for each condition. Type meals are arranged for the ill-nourished on the one hand, and for the obese on the other.

Part II follows the same general plan for infants and children in health and disease. The elaborate milk formulas have been entirely replaced by simple mixtures.

Through the whole work runs the idea that each is an individual case for which modifications are to be made.

THE HUMAN BODY, by Marie Carmichael Stopes, Doctor of Science, London; Doctor of Philosophy, Munich; Fellow of University College, London; Fellow of the Royal Society of Literature and the Linnean and Geological Societies, London; President of the Society C. B. C. and Racial Progress, with 53 illustrations and color plates. G. P. Putnam's Sons, New York, London, The Knickerbocker Press, 1926. \$2.50.

Without preface or introduction this book opens directly the discussion of the human body's *individual units*, and proceeds through its *general architecture* to its *physiology general and special*.

It is written for the general public and especially for those passing from childhood to youth.

Of all books purporting to teach the high school pupils about him- or herself, this is by far the most suitable which has come to the reviewer's notice.

Digestion, circulation, respiration and thought processes are described in a manner suitable to the task of giving the young in-

telligence of themselves for which they will have daily need.

The chapters on matters of sex are written delicately and tactfully, yet with none of that false modesty which is the essence of vulgarity.

A PRACTICE OF PHYSIOTHERAPY, by C. M. Sampson, M.D., Formerly of the Physiotherapy Service, Walter Reed U. S. Army General Hospital, Washington; Formerly in Charge Reconstruction U. S. Public Health Service Hospital No. 70, New York City. With 146 illustrations. St. Louis, the C. V. Mosby Company, 1926. \$10.00.

The great extent of the use of physiotherapy by the Army hospitals has been one of the greatest recommendations of this system of treatment. His experience at Walter Reed and elsewhere in the service has afforded the author unusual opportunity for forming definite opinions as to the advantages and limitations. The preface leads one to believe that these opinions will be expressed with vigor.

In part one the physics and technic there are twenty-three chapters; in part two the clinical application takes up nearly two hundred pages; while in part three there are about forty pages of general considerations.

The width of the field of application may be conceived from its clinical application to such far related conditions as: acne vulgaris, chronic appendicitis, cirrhosis of the liver, constipation, glaucoma, obstructive jaundice, acute nephritis, pediculosis corporis, septicemia and whooping cough.

INTERNATIONAL CLINICS, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles; Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A. Vol. III, Thirty-sixth Series, 1926. Philadelphia and London, J. B. Lippincott Company, 1926.

There is a timely article on "Gastric function following operations on the stomach" from the Research Institute of Lankenou Hospital, Philadelphia, the appraisal of the functions of the liver is undertaken by Captain William D. Fleming, of the Army Medical Corps, and Dr. N. P. Norman, of New York, summarizes the present knowledge of vitamins.

Dr. L. F. Bishop gives a clinic of seven patients under observation for ten years or more after attaining a blood pressure of 200. This is amply illustrated by drawings and

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Under "Travel," "notes on European Medicine and medical education, by Dr. Louis B. Wilson, of Rochester, Minnesota, will delight and inform; and addresses of welcome to members of the Interstate Post-graduate Assembly by the Governor of Rome and others of high degree in Italy serve as further evidence that medicine knows no national boundaries. "The Pope's Address delivered to a group of American and Canadian physicians" is a perfect benediction.

THE SURGICAL CLINICS OF NORTH AMERICA, August, 1926. Vol. 6, No. 4, Chicago Number. Philadelphia and London, W. B. Saunders Company.

Dr. A. D. Bevan conducts a clinic illustrating several phases of stomach and color surgery. An extended discussion of pre- and post-operative care supplies the text for the second. Other clinics of unusual interest illustrated the following conditions or operations: *Immediate improvement on extrapleural resection of ribs of one side in active phthisis, Kohler's disease, multiple suppurative arthritis, consecutive perforations of duodenal ulcers and tumors of the cauda equina.*



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WHERE? Atlanta, Georgia, "The Convention City of Dixie."

WHEN? November 15-18, 1926.

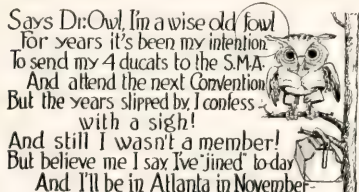
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ARE LEGAL TESTS OF INSANITY A NECESSARY OR USEFUL DEVICE?*

W. M. HENDREN, ESQUIRE, Winston-Salem

The topic suggests one of the many vexing questions arising out of the application of the criminal law to the mentally disordered.

There is a notion prevalent in the minds of medical men that the law bears hardly on the insane criminal; that he is judged by a rigid formula, which leads to conviction whether he is sane or insane, or at best renders his conviction a matter of accident, and they are insistent upon radical changes to ensure that justice shall be done.

On the other hand, much is made of the frequent resort to the defense of insanity "sustained by the evidence of ingenious experts whose theories are difficult to be met and overcome." Thus, it is said crimes of the most atrocious character often go unpunished, and the public safety is thereby endangered.

For the moment let's close our ears to the din of these contending factions and investigate the law's machinery for dealing with a person charged with crime, where it is asserted that he was insane at the time he committed the act, in an effort to see where that machinery jolts and jars, and thus have a more or less intelligent notion where to apply oil or make repairs; perhaps a complete overhauling may be indicated.

The prevailing method, but with exceptions and dissents, is a trial before a judge and a jury, where the question of his accountability to the law as a criminal is a mixed question of fact and law; the existence, the nature, and the extent of the mental ailment being a fact for the jury, and whether

the condition of mind found by the jury shall afford immunity from punishment depending upon certain legal tests or formulas laid down for the guidance of the jury as a matter of law by the judge. Under this plan the question presents itself to the court in a twofold aspect, (a) whether the mind is healthy or diseased, and (b) whether that particular condition of mind can safely be recognized, considering both the general and the individual security, as a ground of exemption from responsibility to the law. In theory, but not always in practice, there are really two distinct and separate questions for the jury, to be taken in order, viz.: (1) Was the defendant mentally unsound when he committed the physical act, and (2) if so, was his affliction of a kind and degree that comes within the exemption from responsibility as measured by one or the other of the legal tests?

Out of this method comes the question that will not down: Can there be such a thing as a legal test of insanity? Does the use of such tests serve the social interest involved?

I cannot here trace the lineage of these tests. Suffice it to say—and that is the amusing part of the whole business—that the law's definition of unsoundness of mind, by which, to use the language of the medical critic, "one-half of mankind are mad, and half the mad are wise," is a product of the medical profession, long since discarded by the doctor, as he has kept step with advancing knowledge, but clung to by the lawyer with tenacity and ferocity—an example of a foster-father fighting to the death for a door-step brat.

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And what is the test or formula to which the prisoner's mental condition is subjected? In most of the States of the Union, regardless of the type of mental disorder and the symptoms disclosed by the evidence, the right and wrong test, i. e., whether the party at the time of committing the physical act knew the nature and quality of the act, or if he did not know it, he knew he was doing what was wrong, is operative. In twenty-three States,—and North Carolina is in this list—this test only is employed. That is to say, these States do not provide for exemption from responsibility as a criminal in cases of mental diseases which express themselves largely through disorder of the volitional-emotional mode of life, the jury believing the defendant knew right from wrong. In Brandon's case, 53 N. C., 468 (1860), Judge Manly said of the right and wrong test that it "has long been resorted to as a general criterion for deciding upon legal accountability * * *." The test was there thus phrased:

"The accused should be in such a state from mental disease as not to know the nature and quality of the act he was doing, or if he did know it, that he did not know he was doing what was wrong, and this should be clearly established."

A recent statement of the law on this subject is found in Terry's case, 173 N. C., 762 (1917), where the jury was told to acquit if the prisoner was "afflicted with mental disease" and "this unsoundness of mind" was of "such degree as to create an uncontrollable impulse to do the act charged by overriding the reason and judgment and to obliterate the sense of right and wrong as to that particular act, and to deprive the prisoner of the power of choosing between them," but if he "was conscious of doing wrong at the time he committed the homicide," he was "responsible in law."

In twenty-two of the States there is coupled with the right and wrong test the rule that irresponsibility may result from the existence of an insane irresistible impulse, even though a knowledge of the wrongfulness of the act may have existed at the time. In other words, in these States the effect upon conduct of disorder of the impulses arising out of a diseased mind is taken into consideration through the irresistible impulse test.

I doubt if today the delusion concept can truly be said to constitute, in itself, a test; it is rather an element that is considered in connection with the two tests already discussed—the knowledge rule and the irresistible impulse rule.

* * * * *

Crime consists of two parts, "the outward act, and the state of mind which accompanies it." A prerequisite of crime is, then, a mind capable of forming and holding a criminal intent. At once we see we are in the domain of psychology.

The claim of immunity from punishment as a criminal arising out of insanity is but a specific instance of the more general proposition that no person can be held criminally liable and punishable for an illegal act, unless that person has sufficient mental capacity to entertain a criminal intent. In short, the guilty mind is an essential of crime. This guilty mind, the *mens rea* of the law, is the product of several mental elements—volition, intention, knowledge, etc., each of which may be affected by the mental disease or defect of the offender. And if the mind is to be considered as a unit, and not made up of several distinct and separate compartments, logically, a mental disorder or disease affecting any of these elements, ought, under the law, serve to excuse from crime.

Within the compass of this paper the word *right* is used as a qualification of conduct, and not at all as a synonym of *truth*. Wrong is the antonym of right. Speaking by and large, right represents the opinion of organized society as to the sort of conduct which best subserves and promotes its interests. And that is wrong, which in the opinion of organized society is detrimental to the prosecution of the interests of society. In an effort to make practical use of these abstractions, it may be said that to predicate of a man knowledge of right and wrong is to affirm that he is aware of the opinion of the social group which controls his actions. This is recognized as an incomplete statement. For one thing, it fails to emphasize, if it does not pass over, the moral quality of action. But for present purposes it is deemed sufficient.

The problem of the criminal insane is but a subdivision of the larger question of crime and criminals and of the actual value of the

legal means employed by organized society to cope with this phenomenon. The whole question of criminality presses hard for intelligent consideration. And this consideration needs to be given free of the absoluteness of "what is." "What ought to be" should be allowed to hale into court "what is" as upon an order to show cause.

The mentally unsound constitute a much larger proportion of those accused of crime than is popularly supposed, and much more criminal conduct than the man in the street dreams of is due to some form of disordered mentality. One of the results of a mechanical age is to speed up the nervous and vital forces of man along with the machine, and to place upon him a more complex and greater burden than he may be able to bear.

Traditionally, we think of the offender against the laws of society "as a free agent, who, having before him a choice of whether to do right or wrong, chose to do wrong." We are beginning to realize that "the old analysis of act and intent can stand only as an artificial legal analysis, and that the mental element in crime presents a series of difficult problems."

Modern studies of penology and criminology drive home the realization of the very close connection between mental disease and crime.

There is indeed much to suggest that the time is here for a thorough going re-examination of the entire problem of crime—its causes, its prevention and cure—and of the philosophy and function of our criminal law and procedure. When undertaken, there will be required the earnest and persistent effort of the sociologist, psychiatrist, psychologist, and legal scholar.

It is most unfortunate, as well as humiliating, to acknowledge that it requires the notoriety of a McNaughton's case, a Guiteau's case, a Ronald True case, or a Leopold-Loeb case, to provoke the thinkers of a particular day and age into preoccupation with the great social problem of crime.

The issue is not exclusively a legal one. A study in living law is not to be confined to the legal considerations involved. If the criminal law is to be regarded as a social instrument, then law must be looked at, not solely as an end within itself, but as a means to an end. This can mean nothing less than

that there are times and occasions when the socially desirable end which the criminal law is attempting to achieve must be reformulated, and when in this process it is found that strict adherence to theoretical and logical demands results in too great a social or individual sacrifice, the need of remodeling the law by calling to its aid the demonstrated data of other social sciences is indicated.

Some means must be evolved in the realms of social and criminal law, whereby the crystallized, mature, scientific opinion of an epoch may be made known authoritatively and usefully to legislators and leaders of bench and bar. This, of course, does not mean that the law should be so quickly responsive to the appeals of the other social sciences as to accept, without criticism and a due period of test, even the matured opinions of scientists, and certainly law should respond slowly to opinions incompletely formed, held by but a few, not yet out of the realm of the problematical.

There is, however, need for the "philosophy that will mediate between conflicting claims of stability and progress, and supply a principle of growth." In this crusade, the layman, and particularly the medical man must not grow impatient with the law. He must avoid the disposition to rail at the law. It must be recognized that the "system" of the law, its instrument of rule and concept, "carry with them a tendency to make law an end, rather than a means." If justice is to be administered "according to law" and not according to caprice and prejudice, some rigidity is essential; "rules must be made for cases in gross and men in the mass, and must operate impersonally, and more or less arbitrarily." Since law "formulates settled ethical ideas, it cannot, in periods of transition, accord with the more advanced conceptions of the present." There must of necessity be always present "an element, greater or less, that does not fully correspond with the present needs or present conceptions of justice." This is but to say that in law as in other spheres there are fundamental antagonisms. Who, as yet, has been able to say categorically where moral responsibility begins and ceases, in any particular case?

The lawyer needs to bear in mind that any thorough analysis of *menes rea* must have its point of departure in psychology,

and the doctor, more especially the psychologist and psychiatrist, should take heed of the lawyer's requirements and limitations.

The legal theorist must give up the idea that the *mens rea* of today is exactly the *mens rea* of two hundred years ago, and the medical theorist must give up the notion that every departure from mental normality should remove the individual from the reach of the strong arm of the law. The law, through the agency of the jury, is and should remain the custodian of what is right and what is wrong in the community, for thereby, and thereby alone, is secured the just and necessary protection of society.

Law attempts and insists upon a distinction between those species of mental unsoundness which will exempt from criminal responsibility and those which will not. Without injurious consequences "a slight departure from a well balanced mind may be pronounced insanity in medical science" but "such a rule cannot be recognized in the administration of the law, when a person is on trial for the commission of a high crime. The just and necessary protection of society requires the recognition of a rule which demands a greater degree of insanity to exempt from punishment."

And here is the nub of the controversy between the legal and the medical professions. It may be doubted whether the difference can ever be completely reconciled, for the want of harmony has its roots in the fundamentals of the two sciences. The legal and medical doctrine of insanity in its connection with responsibility cannot be identical, and for this reason: "Law demands a fixed rule. Medicine admits but a general principle."

The conflict is of long standing. More than one authority on either side has tried to bring about a reconciliation between the contending factions, but with little success. The warfare has of late lost much of its former asperity, but a *modus vivendi* satisfactory to both parties is yet to be found. For instance, no well informed lawyer would now think of saying, as did the Lord Chancellor in the House of Lords in 1862, that "the introduction of medical opinion and medical theories into this subject has proceeded upon the vicious principle of considering insanity as a disease." We have happily passed be-

yond the stage where a lawyer would dare think the statement of Sir Fitz James Stephen that "if a special divine order were given to a man to commit murder I should certainly hang him for it unless I got a special divine order not to hang him" butters any parsnips or sheds any light on the subject.

While the points of departure of the two professions may be far apart, yet that is no sufficient reason to continue to make faces one at the other, but rather that condition calls for a very sincere spirit of co-operation to see that the varying points of view make no more trouble than is absolutely necessary.

To make effective this distinction between those species of mental unsoundness which will and which will not exempt one from accountability to the law, the law has formulated, as hereinbefore indicated, certain tests or formulas. Medical authority, and for that matter authority in other fields, insist that there can be no such thing as a test of irresponsibility arising out of insanity. These hold that not only is insanity a question of fact, but so also is the question of irresponsibility, i. e., a person is not answerable to the law as a criminal if when he committed the act he was affected with a mental disease of the kind and extent that deprived him of the capacity to entertain a criminal intent.

In addition to this denial of the rightful existence of any legal test, the right and wrong test is condemned by the great current of modern medical authority who believe it to be "founded on an ignorant and imperfect view of the disease." The persistence of the right and wrong test is one of the most striking instances, to say the least of it, of the conservatism of the law. This rule of responsibility was based on early medical error, and cannot be reconciled with the doctrine of criminal intent in the light of modern scientific knowledge, yet it retains its place in England and in a majority of the States of this country. The fundamental question of responsibility is whether the act is the product of insanity without the cooperation of a guilty mind.

I am prepared to admit that legal tests of all kinds are of doubtful legal lineage. That they are illogical is fairly obvious; that they oftentimes confuse the jury appears beyond

question when the cases are read. That they are quite often disregarded by the jury finds evidence in the results of trials all the way from Hadfield's case to that of a case of notoriety lately tried in the Superior Court of North Carolina. What happens is that the expert under oath says there is no test or lays down the medical test, and the judge under oath tells the jury there is a test and then lays down the legal test, and the jury goes out and does the best it can.

The right and wrong test is open to the very valid objection that it takes cognizance of one element only of the required intention, namely, knowledge, thus confusing the general requirement of a criminal intent with that of the specific element of knowledge of right and wrong.

The earliest, simplest and most authoritative, if not the only authoritative principle of the common law dealing with insanity, is expressed in the general rule incorporated in the phrase *mens rea*. The root of the trouble lies in substituting for a general criminal intention, a single element of that intention, knowledge, and thus convict when that one element of criminal intention is proven to be intact, though disorder of the emotional-volitional inhibitory power may be pronounced.

There should be added to the right and wrong test in North Carolina a recognition of irresponsibility where the act is committed under an impulse which the person was, by mental disease, in substance deprived of any power to resist. Under this rule more than a weakening of control by mental disease should appear. Control must be so impaired by disease as in substance to amount to complete loss of control.

When we realize how tests are evolved, namely, through the slow influence of advancing medical opinion upon the open-minded judge, we need not despair. The revision of tests and the repudiation of tests can and will be had if the legal and medical professions will study the operation of the law of insanity in practice and in the light of well considered and matured scientific opinion bring it into harmony with present day science and the best thought of the period.

There is nothing inherently sacred in the origin of these tests, nothing absolutely au-

thoritative in them, nothing very consistent in them, and no very good reason why they should not be changed, provided, always, something better is offered. But so long as the jury system is to be maintained, and our theory that justice must be according to law, and not dependent upon the shifting caprices of courts or the equally unsubstantial passions and prejudices of jurors, I doubt if any other method will serve both the social and the individual interests involved. This thought can be brought into bold relief if we consider some of the substitutes or alternatives. Take, for instance, the plan of Dr. William A. White, a psychiatrist and alienist of many years' experience. This plan provides for the determination of the fact of the commission of the physical act, and then for the determination of the mental condition by experts, not, however, as a jury. Somewhat similar is the plan of Eugene Smith, Esq., who is a careful student of criminology and penology. Mr. Smith's proposal contemplates that first a body of experts shall pass upon the mental condition of the accused, and then for another and lay-jury to pass upon whether he committed the physical act.

Each of these plans are likely to encounter constitutional difficulties arising out of the right of a person charged with crime to have the question of his guilt or innocence, that is, his punishability as a criminal, determined by a jury under the direction of a judge. See *Strasburg vs. State* (1910), 61 Wash., 106. But apart from any question of constitutional law, the jury as a responsibility determining device should not be eliminated. If the jury had no other function than to determine the question of mental disease or health, there could easily be found a better device. The jury does much more than this. It is something more than a mere fact finding device, its function extends beyond that of drawing conclusions from more or less conflicting evidence. One of its functions is to represent the prevailing public opinion and morality. It is the custodian or guardian of what is right or wrong in the community. It operates somewhat as a miniature group mind that reflects the sentiment of the community, and thereby furnishes a safeguard for personal freedom and reputation.

The alternative plans just noted, and others of like kind, constitute the delegation to the medical profession of a function which belongs to society's judico-penal machinery. It is not desirable that the medical profession should exercise any such function. What is desirable is that it be permitted to furnish judge and jury the benefit of its special knowledge and experience, free as possible of technical rules of procedure, the tendency of which may be to greatly nullify their value.

Moreover, it is not desirable that all mentally unsound persons be acquitted, and either forthwith or soon after such acquittal, released from all social control. The upshot of it all is, I am constrained to believe, there are needed somewhat more or less definite criteria of irresponsibility declared by the law, but so framed as to permit trained, unbiased experts to lend their unhampered special assistance to the judge and jury, whose task it is and whose task it should remain, to dispose of those who stand charged by the criminal law.

Then there is the plan in vogue in New Hampshire and in Alabama. In those states the whole question, that of the mental condition, as well as whether that particular mental condition should exempt from punishment, is turned over to the jury, free of the restraint or guidance of any rule. This runs counter to an essential of law which is predicability.

The purpose of legal doctrines is to protect the social security and well-being, and so they are to be tested by the degree of protection which they afford to social and to individual interests or rights. They must not be bound down too arbitrarily by logical or purely analytical considerations any more than by the grip of historical precedents and correctly traced legal genealogy. On the other hand, the law which protects must be a predicable law; indeed, one of the essential attributes of all law is predicability. Judges and juries must not be free to render decisions based purely upon their personal predilections and peculiar dispositions, no matter how good or wise they may be. That they shall be bound by principle and that these principles shall furnish a standard of conduct is the teaching of the accumulated wisdom and experience of the past. Once rob the law of this predicability and the

state reverts to a government by men rather than by law. No one will be secure in his or her interests or rights, for no one can foretell what interest individual judges and juries may see fit to protect or disregard. The anxious fears and troubled insecurity of the old Star Chamber days existed because the criminal law permitted judges to determine criminality by their own individual standards and prejudices. If then a legal doctrine is to be tested functionally according to the degree of security which it affords to the individual and social interests which the law was created to protect, any doctrine which tends to rob the law of its predicability must, therefore, be examined carefully and critically. Can we, with safety, adopt a rule which declares there is no standard or test of criminal responsibility, save the broad one of diseased mind; that condition to be found as a fact by the jury, upon the testimony of medical views of what is and what is not a diseased mind? Will the peace and good order of society and the individual interests be protected, or will juries be free to acquit when their own and the public sympathy has been with the accused, and especially when the provocation to the crime has excused it according to public sentiment, but not according to law? When you do away with all legal criteria of responsibility the risk must be run of the influence of those who endeavor to prove that men are mere machines and that the wrong they do is not their doing, but the outcome of disease, and the influence also of those who confound the symptoms of a neurotic condition with the symptoms of mental disease.

It is not difficult to see how the law seized upon the right and wrong test. This is not the only feature of the law that was worked out under the sway of the vindictive or retributive notion of punishment for crime. To punish one as a wrong doer to satisfy a spirit of vengeance, who did not know right from wrong, was manifestly unjust. But if in spite of his insanity he knew he was doing wrong, he should be punished.

Modern ideas as to the object of the administration of criminal justice have shifted since the day when that conception arose. The emphasis is now upon prevention and reformation, with a trace of deterrence. The original conception of retribution and ven-

geance has been submerged in the on-rush of humanitarian ideas. Under these conditions the underlying basis of the tests of insanity loses much of its force. In this day and time the basic purpose of criminal justice is protection of social and public interests, and so the problem is how best to protect those interests without unnecessary trespass upon the interests of the individual. So whenever "the continued free activity of the individual defendant constitutes sufficient menace or danger to the social or public interests to outbalance the interest of the individual, the individual defendant should be in some way restrained. It is evident that the determination of this question does not depend upon whether the individual defendant knows right from wrong; an insane defendant may be an even greater menace or danger to social and public interests than a sane defendant who has consciously and of his free will chosen the path of evil."

Modern conceptions of criminal justice have caused many to ask "if the time has not come to cease patching and repairing the old knowledge of right and wrong tests in a seemingly vain endeavor to keep pace with the developments of modern psychiatry, and instead to examine the subject afresh with a view of discovering what should be the basic criterion of insanity tests for the purpose of attaining the real objects which we seek? And will not this basic criterion depend more upon danger to social and public interests than upon the defendant's knowledge of right and wrong? Should not the emphasis be shifted from the question of whether or not the defendant committed a technical crime, to whether or not, for the protection of society, the defendant should be removed to an institution where he may be properly cared for?" It would seem that the much discussed Massachusetts Law of 1921, the purpose of which is to detect the mentally diseased and defective, thus making it possible to obviate the necessity of a formal trial and determination of the comparatively empty question of their criminality, is a step in this general direction. Whatever may be one's individual views it seems clear that the whole subject badly needs fresh consideration and study in the light of modern developments.

Gustave Aschaffenburg (*Crime and Its Re-*

pression) thinks he has forecast the time when the "proud structure of legal security" will have a "sure foundation." I quote his words:

We have reached the point where the apparently firm foundations of criminal law appear to quake, where a new structure is to be erected, the stones of which have not yet been tried, a part of the material of which has still to be found. But this cannot now or ever be done in the study, nor by means of theoretical abstractions. Only dispassionate consideration that views impartially the phenomena which we call crimes, which observes first and then concludes,—in a word, only the natural scientific method—can smooth the way that leads to a knowledge of crime and criminals.

In the pursuit of this study we may come to a wholly new conception of crime and responsibility and punishment. A bad man or criminal may come to be him who, whatever the antecedent cause, is so constituted, that under given circumstances his emotions are so much greater than average strength, or his power of imagination or representation of inhibitory ideas or emotions is so much weaker than the accepted minimum, that the line of least resistance is some of the time or all of the time in the direction of anti-social conduct of a kind which threatens the supposed interests of society.

In this latter state of human development we may expect, therefore, that society will react against those who in its opinion threaten its well-being, with no idea of punishment in the ancient sense of the word. It will be increasingly unimportant as to whether the transgressor entertained the same opinions as that of organized society as to what constituted right and wrong and voluntarily adopted the harmful course. He will be dangerous when he is so constituted that he is unable to square his conduct with the best interests of society. His opinions are unimportant except so far as they influence his conduct rather than as qualifying it.

By that time, perhaps, the inherent difficulty of finding "a proper mean between a system of hard and fast rules and one of completely individualized justice" will have passed away; for the law is a growth. It has grown. And the fact that "historical mistakes have contributed to its growth," has not prevented its trend to be "in the direction of rules consistent with human nature."

THE TOXAEMIAS OF PREGNANCY*, **

WILLIAM DE B. MACNIDER, M.D.

(The Laboratory of Pharmacology, University of North Carolina.)

The period of gestation in animals is naturally looked upon as a physiological process. With medical men there is a tendency, if not a rule, to assume the physiological character of this state and let it alone until it comes to its termination or until certain symptoms of very real danger, not infrequently terminal processes of a pathological character develop. The medical man as well as the research student is apt to forget that, even though pregnancy should be a normal process, the state entails certain local and systemic strains on the organism during gestation, with which it may not be able to cope. The pregnant animal may fail to make its adjustment to the foetus and it may express this inability to effect an adjustment by certain symptoms which are not physiological expressions. This condition for a given animal or woman has become essentially pathological. The truth of this statement may be readily ascertained by consulting the mortality statistics of pregnant women. The death rate of women during this state with the loss of the product of conception is so high when we consider the naturalness of the state, that it would appear that medical men, and especially men specifically interested in obstetrics, should ask themselves the cause for this mortality and become heartily interested in any measures which will make of gestation as near a physiological process as possible.

In the following paper, I hope to present some observations of a scientific nature to show that even in the lower animals the period of gestation may be very much of a strain on the pregnant organism. Such indications of strain and the subsequent departure of the maternal organism from the normal should, if possible, be recognized and

measures instituted to effect a readjustment and permit a continuation of the pregnancy to its natural termination. I can not imagine a more sacred duty on the part of a physician.

Anyone who tries to study the so-called toxæmias of pregnancy very likely does one of two things. He either comes out through the same door of ignorance through which he entered, or he comes out with what may be worse, a mechanical classification. Most of these classifications range all the way from an intoxication psychosis (whatever this may be) which causes simple vomiting, to an acute yellow atrophy of the liver which may prove fatal in a few hours. Between these extremes are grouped the toxæmia of pernicious vomiting, the kidney of pregnancy, pre-eclamptic toxæmias, eclamptic toxæmia with and without convulsions and acute nephritis superimposed on various types of chronic nephritic processes. There is a definite tendency to card index these states in terms of clinical entities and there have not been many attempts to see the toxæmias in terms of the pregnant organism as a whole; to ask the question if there may not be a disturbance in some fundamental physico-chemical characteristic of the organism which leads to a generalized toxemic state and that such a general process may become clinically specialized in one or more organs.

In virtually all of these toxæmic conditions, there exist certain common symptoms; nausea and vomiting, a mental disturbance which is usually of a hypersensitive nature and which may later show itself in terms of depression and even coma, a tendency to local or generalized oedemas, some indication of renal disturbance which is variable in its manifestations, changes in blood pressure and more rarely symptoms and chemical evidence of damage to the liver. If in these disturbances during gestation we can "catch the resemblances of things, which is the main point," we may be able to better understand

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the disturbance as a whole. The observations which are to follow will, in no measure, clear up with understanding the toxæmias of pregnancy, but it is believed they will point out the nature of a generalized disturbance which may occur during gestation and which may finally lead to a toxæmic state.

During the past eleven years, ninety-six pregnant dogs have been used in this laboratory for various purposes.¹ These animals have varied in age from eleven months to ten years and four months. During the routine study of the urine from such animals and with the aid of various renal functional tests, twenty-two of the animals were found to have developed some type of nephritis. This statement does not mean that the pregnancy was the cause of the nephritis. So far as is known, the nephritis may have been a coincident secondary to some other causative factor. These animals with a nephritis have been excluded from the present series of animals under discussion. The remaining seventy-four animals had no evidence of renal disease and should be classed as normal pregnant animals. During the gestation period, these dogs were kept in kennels and fed on scraps of meat, bread and milk. No restriction was placed on the consumption of food material, or water. During the fourth week of gestation and again during the ninth or terminal week, the animals were placed in metabolism cages, allowed the same diet and subjected to the following studies on four successive days. Urine was obtained by catheterization and examined for albumin, glucose and acetone. Centrifugalized specimens were studied for casts. The phenosulphonephthalein test for renal function was employed according to the method devised by Rowntree and Geraghty.² The reserve alkali of the blood, which may be employed as an expression of the acid-base equilibrium of the blood, was determined by the method of Marriott³ Such determination may be made very easily in any private home by ascertaining the tension of carbon dioxide in alveolar air according to another method of Marriott.⁴ As a result of the observations on the stability of the acid-base equilibrium of the blood in these seventy-four pregnant animals they may be divided into three groups depending upon the influence which the age of the animals exerts on the maintenance of

the stability of this equilibrium. One of the principal mechanisms in an animal which regulates the stability of this equilibrium is the kidney. The first studies on these animals showed the kidneys to be functionally normal. The urine was free from albumin and casts and did not contain acetone. The elimination by the kidneys of phenosulphonephthalein in a two hour period was normal. These observations are of importance, for if there had occurred in the animals of different ages a disturbance in the acid-base equilibrium of the blood associated with a kidney injury, it would have been justifiable to assume that such an injury caused a retention in the blood of acid bodies (acid ions) which caused the disturbance. The disturbance, however, has not been associated with such an injury but the frequency with which it develops shows a definite relationship to the age of the animal and the duration of the gestation period. This observation is also of very great clinical importance. It establishes as a fact that such a fundamental disturbance may occur in the blood and tissue juices which may finally lead to serious impairment of tissue and organ function, without first giving evidence of the disturbance by changes in the composition of the urine or in the ability of the kidneys to eliminate phenosulphonephthalein. The pregnant animals comprising the following three groups at the commencement of gestation had a normal urine and a normal reserve alkali of the blood.

Group I is represented by twenty-two dogs which varied in age from eleven months to three years. A study of these animals at the end of the fourth week of gestation showed them to have a normal urine and a reserve alkali of the blood which was normal. The readings were 8.0 to 8.15. Two of these animals in the last week of the gestation period had a reserve alkali of the blood which was reduced to 7.95. At this time the urine from these animals was normal and the elimination of phenosulphonephthalein was 68 and 71 per cent by the respective animals. The point of interest in this young group of animals is, that with two exceptions, they were able to maintain during the strain of the gestation period a normal equilibrium of the blood. In none of these animals, including the two in which the reserve alkali of the

blood was slightly reduced, was there any evidence of renal injury.

Group II is represented by thirty-four pregnant dogs which varied in age from three years and one month to six years. This group includes the animals between the extremes of youth and early senility. At the end of the fourth week of the gestation period, one of the animals showed a reduction in the reserve alkali of the blood to 7.9. The urine of this animal was normal and the elimination of phenolsulphonephthalein was 58 per cent. The remaining thirty-three dogs failed to show any early disturbance in the equilibrium of the blood, in the composition of the urine and in the output of phenolsulphonephthalein. The second study of this group of animals in the ninth and terminal week of gestation showed that twelve of the number had a disturbance in the acid-base equilibrium of the blood. The reserve alkali of the blood was reduced from the normals of 8.0 or 8.15 to 7.9 or 7.85. The remaining twenty-two animals were normal. Eight of the twelve animals in which the reserve alkali of the blood was reduced to a point not below 7.9 had a urine which was normal and an elimination of phenolsulphonephthalein which was not below 48 per cent in a two hour period. The four remaining animals in which the reserve alkali of the blood was reduced to 7.85 had a urine which contained a variable amount of albumin, acetone and a few hyaline and granular casts. The output of phenolsulphonephthalein by these animals varied from 38 to 61 per cent. Five of these animals went to the end of the gestation period and following it rapidly established a normal acid-base equilibrium of the blood. The urine became free of albumin and acetone and the casts disappeared. One of the animals developed an air hunger type of breathing and died in convulsions. In this group of animals, all of which were older than the animals of Group I, there is shown a definite tendency for the acid-base equilibrium of the blood to become unstable as the termination of the period of gestation is approached. Those animals which showed a marked reduction in the reserve alkali of the blood also showed acetone in the urine and evidence of renal injury as indicated by the presence of albumin and casts in the urine and a reduction in the elimination of

phenolsulphonephthalein. The output of this dye is apparently not proportional to the degree of disturbance in the acid-base equilibrium of the blood or to the severity of the renal injury as indicated by the amount of albumin and the number of casts which may be found in the urine.

Group III is represented by eighteen pregnant dogs which varied in age from six years to ten years and four months. By the end of the fifth week of the gestation period, eleven of these animals representing the older group developed a disturbance in the acid-base equilibrium of the blood. The reduction of the reserve alkali varied from a decrease from the normals of 8.0 to 8.15 to 7.9. One of the animals with a reserve alkali of 7.9 showed a trace of albumin and glucose in the urine, an occasional cast but no acetone. The elimination of phenolsulphonephthalein by this animal was 67 per cent. By the end of the ninth week of the gestation period, fourteen of the eighteen old pregnant animals showed a reduction in the reserve alkali of the blood which varied from 7.95 to 7.85. Six of these animals showed albumin, acetone and casts in the urine. One of the animals died in a state of air hunger without developing convulsions. Muscular twitchings were present.

CONCLUSIONS

1. Dogs, during the period of gestation, may develop a disturbance in the acid-base equilibrium of the blood which is not primarily a retention phenomenon due to a renal injury but which is associated with the age of the animal, and the duration of the pregnancy. Such a disturbance occurs more frequently as the age of the animal increases and is more marked in the later weeks of gestation than in the early weeks.

2. The development of the alteration in the acid-base equilibrium of the blood which may be of primary importance in finally giving rise to a toxæmic state which expresses itself in terms of a disturbance in the functional capacity of one or more organs can not be ascertained by a chemical study of the urine or a study of the elimination by the kidney of phenolsulphonephthalein. It can be ascertained by one of the simple methods of Marriott.

3. The cause for the disturbance in the

acid-base equilibrium of the blood which may finally result clinically in an acidosis and in death with or without convulsions has not been ascertained. It should be recognized early and treated as a symptom and not be permitted to progress until such an altered physico-chemical environment is given organs in the form of their blood supply that degenerative changes are induced. If this fundamental equilibrium of the blood is apt to become unstable during pregnancy and perhaps serve as a background for the development of specialized toxæmic states, measures should be instituted as soon as the pregnant state develops to aid in stabilizing the equilibrium.

4. These measures consist in the use of a diet which is easily burnt and while it is burning, one which will completely oxidize acid bodies (acid ions) of a harmful character which, if retained, reduce the alkali reserve of the blood. Fats should be withheld or greatly restricted. Meats should be curtailed. Carbo-hydrates, especially candy, would appear to be indicated. A simple alkali as sodium bicarbonate or sodium citrate in sufficient amount to render the urine neutral or very faintly alkaline should be of value. The craving of women during the period of gestation for an alkali or for sweets is well known. This desire on the part of the organism may be of much significance.

REFERENCES

1. Mac Nider, William de B.: *Jour. Exp. Med.*, Vol. XLIII, 53, 1926.
2. Rowntree, I. G., and Geraghty, J. T.: *Jour. Pharm. and Exp. Therap.*, Vol. 1, 579, 1909.
3. Marriott, W. McKim: *Arch. Int. Med.*, Vol. VII, 840, 1915.
4. Marriott, W. McKim: *Jour. Amer. Med. Assoc.*, Vol. LXVI, 1594, 1916.

DISCUSSION

Dr. Ivan Procter, Raleigh:

I do not feel at all capable of discussing this paper of Dr. MacNider's, for he knows more about the toxemia of pregnancy in a minute than I shall ever know, but there are a few questions I want to ask. I think it is one of the most vitally important subjects before the profession today. There seems to be more and more toxæmia of pregnancy every year, and particularly do we see more when we see women in early pregnancy. I am very much interested in those cases that do not show any urinary symptoms. I have seen

cases go into eclampsia who the day before had perfectly normal urine and normal phthalein output. I should like to hear Dr. MacNider explain why the same cases do not show the ordinary pre-eclamptic symptoms—i. e., headache, gastric symptoms, and, particularly, rise in the systolic blood pressure. Upon these symptoms I base my conclusion, and they are my grounds for treatment. I should like Dr. MacNider to tell us whether these cases that do not show the ordinary urinary symptoms do show the ordinary signs of pre-eclampsia.

Dr. M. Pierce Rucker, Richmond:

I, too, should like to ask Dr. MacNider a question, and that is, do these dogs that do not seem to handle the acid-base balance well, show any changes in the placenta? I am not quite sure that I understood what brings about this inability to handle it.

Dr. J. P. Munroe, Charlotte:

I enjoyed Dr. MacNider's most excellent presentation of this subject, as we all do every time he gets on the floor. It has occurred to me, as a practical application of this subject, that we should pay more attention to the matter of diet that older people take and that pregnant women take. If we would study the question of which foods are acid-forming and which are alkali-forming, we would find a very good therapeutic indication. For instance, we find that meat is acid-forming, and so we limit the amount of proteins that people with high blood pressure take. A short time ago I was interested in the question of fruits, and was surprised to find out how many fruits that we think of as acid are really alkali-forming. Take the fruits we have on our tables every morning for breakfast, oranges and grapefruit; they are not acid-forming. Grapes and grape-juice, on the contrary, are acid-forming. Grapes have tartaric acid, which remains in the system; grapefruit has citric acid, which becomes alkaline in the system. If we would study foods more we should not have to give so much magnesia and bicarbonate of soda—not that I mean that we should not use them, because we ought to use them sometimes, but avoid it, where possible, by the use of the proper foods.

Dr. MacNider, closing:

I can not answer Dr. Procter's question about the pre-eclamptic symptoms. Allen has devised an instrument to make blood pressure determinations on dogs, but I have not become sufficiently accustomed to using it to get results. I do not know what pre-eclamptic symptoms they have other than this disturbance. That is what I call a pre-eclamptic disturbance in a dog. If the dog develops a reserve alkali reduction without any findings in the urine, I am just certain that dog is going to get into trouble during the pregnancy.

A thing that appealed to me especially was the suggestion of Dr. Munroe that it is an age factor. It is a very interesting thing. Young animals eat a lot of food; they have to have it; they are growing, and they can burn it up. But senility does not need it; old animals have stopped growing. That is the time in our lives, and in the lives of these animals, when they get into trouble. My feeling is this—and this is just simply a thought; it is purely a suggestion, for I have no actual facts to hook up to. I believe pregnancy is a very definite strain to an organism, in many, many ways. I believe pregnant animals have to increase their burning capacity in order to handle their own lives and the lives of others.

Now, the youngsters can do that, but the

older animals can not do that, and when they get to the place where they can not burn completely they leave products in the blood, tissue, and juices which are not completely burned. The accumulation of these acids is the thing that upsets this fundamental balance. If it is upset long enough, the blood going to the liver and kidney and the thyroid gland, so far as I know—is so changed in its chemical environment that various glands get into trouble and show it by degenerating. The thing that interested me is that it brings together three things that are fundamental: First, age, youth, and senility; second, disturbance of the acid-base balance in the blood; and, third, pregnancy. I believe it is due to the age of the animal that it is unable to burn completely, and it shows it by this disturbance. It can be handled, it seems to me—I know it can in dogs—by diet and by the judicious administration of alkali. And when I say "judicious," I mean that. I am quite certain that many a person has been killed by squirting an alkaline solution into him. If you disturb the balance on the alkaline side you get just the same trouble as you do on the acid side. It is not natural to shoot things into people's veins. Sometimes we have to do it, but I do not believe it should be done when we can avoid it by a carbohydrate diet and by other measures.

FOR AND AGAINST MERCUROCHROME

FOR

Experimental and clinical evidence of results obtained by intravenous injection of mercurochrome-220 soluble in 173 cases are reported by Hugh H. Young (*Journal A. M. A.*, Oct. 23, 1926). He believes that it has been demonstrated conclusively that with mercurochrome he and his associates have shown in bacterial infections, local and general, what Ehrlich showed was possible with arsphenamine in spirochetel infections; an ability to "sterilize," "cure" or immediately improve the infection. As multiple and repeated doses are frequently necessary, Young proposes that instead of Ehrlich's "therapia sterilisans magna" it be termed a successful demonstration that curative "intravenous therapy," is an accomplished fact.

AGAINST

Ten patients with genito-urinary infections were given mercurochrome-220 intravenously without beneficial results; and in one with septicemia due to streptococcus hemolyticus the organisms became more numerous in the blood stream after treatment, and the patient died.

Mercurochrome-220 injected intravenously into rabbits, immediately after infection with staphylococci, did not kill the infection organisms or prevent the formation of typical staphylococcal lesions.

Mercurochrome-220 given intravenously or by mouth failed to kill typhoid bacilli in the gall bladder of animals suffering with typhoid cholecystitis.

In view of the work here reported, it is not believed that the intravenous use of either mercurochrome-220 or acriviolet offers promise of beneficial results in the treatment of bacterial infections.

The number of clinical cases in which the dyes were used was small. Still from these results, and from the decidedly unfavorable results attending the experiments on animals, continued use of the drugs is considered inadvisable.—Jas. S. Simmons, of the Army Medical School, Washington, in *The Journal of Infectious Diseases*, October, 1926.

THE RELATIONSHIP OF MEDICINE TO CRIME*

BEVERLEY R. TUCKER, M.D., Richmond

I have long been interested in the Juvenile Court and I have watched its growth and increasing usefulness with a sense both of admiration and of pride. Much of what little public work I have been able to do has been closely related to the role that medicine plays in the problems of criminology, and what remarks I shall make are largely based upon experiences gained from connection with the Juvenile Court, the City Home, the Virginia Industrial Home for Girls, the State Epileptic and Feeble-minded Colony, the Psychopathic Clinic of the Medical College of Virginia, the Governor's Advisory Board of Mental Hygiene and the Children's Memorial Clinic. It is interesting to note that with the exception of the City Home none of these social agencies was in existence twenty-five years ago.

As I look back along the path of the past, I can see that the work of the Juvenile Court of Richmond, with Judge Hicks at its head, has been fundamental; and as I turn toward the vista of the future I can see that its work should, and must, be evolutionary.

Through the customs and intolerances of the ancient pagan and the early Christian, and later the reformationist and the puritan, punishment became both the preventive measure and the panacea for crime. How utterly it has failed! The more austere and severe the punisher the more honored he became. To maintain his prestige, crimes had to be invented and so postponement of debt obligation, soothsaying, dancing and almost any act became an overt act.

At present, we deal with as wholesale a number of crimes, though we deal with them somewhat more moderately. We make, indeed, so many laws and prohibitions that one can hardly walk through a day without treading on the toes of various taboos. We still hang and electrocute; the whipping post has not entirely disappeared, and we confine

our prisoners in cells.

Some fair minded men are beginning to think that a great many so-called criminals are not criminals at all. They believe that a few of them are innocent and that a combination of untoward circumstances may have been responsible for their conviction; they believe that the individual's interpretation of liberty and the pursuit of happiness and his innate love of adventure may have caused some not to keep step with their more docile, less independent and at times hypocritical brethren; others, they think, may have become incarcerated by having inadvertently become the victims of some machine of greed, or of power, or of politics. Of the criminals left there are those of us who know that many of these men and women are feeble-minded—irresponsible, little children in intellect, impulse and conduct—that others have a brain injury, occurring at or after birth, and that some are so nervously constituted that resistance to certain temptations is simply a moral impossibility. Four years ago I, with others, examined the population of the penitentiary and found fifty-two per cent of the inmates mentally defective or subnormal and hence, from a medical viewpoint, irresponsible. In fact, I am constrained to believe that *real criminals are rather rare!* If this is a fact, then we are supporting in our penal institutions many persons who should be outside under medical and social supervision, or in other institutions regulated for care and treatment rather than for punishment. Hence, neither law nor medicine are, in themselves, adequate to cope with the so-called criminal situation. But it will require a combination of law, medicine and social agencies to attack the problem.

Within the walls of this splendid building, which we dedicate today, shall be brought together the three agencies which are necessary to deal with conduct disturbances,—law, medicine and social service. Here psychological investigation will outweigh eviltake precedence over punishment; here wisdom; here environmental judgment will

*Read by invitation as a part of the program in dedication of the new home of the Juvenile and Domestic Relations Court of Richmond, Virginia, on October 1, 1926.

expert advice will frequently prevent arrest; here the young offender will be guided, the parents directed and the community protected.

And it is within these walls, I hope, there shall be born and nurtured to maturity a plan by which every individual arrested in Virginia for any offense, and certainly for any offense greater than a simple misdemeanor, shall have after indictment, or before, if it is possible, a competent, neurological and psychological and sociological examination, the results of which should be made a permanent part of the court record. Why should we wait until the supposed offender is an inmate of the penitentiary before these examinations are made?

If such a plan is born within these walls, it will not only save Richmond and Virginia a vast amount of money in trying and retrying certain cases, or such a plan will not only obviate the necessity of the too often conflicting expert testimony, which at times discredits both law and medicine, or such a plan will not only put this community many years ahead of the times in criminal proceedings, but, more than all, such a plan will give each

individual who gets into trouble with the law a fair, scientific, Anglo-Saxon, humanitarian opportunity to be dealt with not only according to law but also according to medicine and according to the higher aims of society. Every member of a family and every friend wishes and urges that their particular offender be so dealt with, but they are absolutely indifferent, or in definite opposition, when it comes to dealing with those with whom they are not directly connected. It is said that this is human nature. If it is human nature, then there is something constitutionally wrong with human nature. Let the "milk of human kindness" be a universal beverage. But more than that, justice must not only be tempered with mercy, but it must be tempered with understanding, a higher quality still.

In closing, I do not hesitate to bespeak not only your interest in the furtherance of the magnificent work of the Juvenile Court of Richmond, but I bespeak your active cooperation and support, feeling assured that these are "more to be desired than gold, yea, than much fine gold."

THE HEART AND PREGNANCY*

A. A. SUSSMAN, M.D., Baltimore

My own actual experience with the circulation in pregnancy was chiefly drawn from observation of cases, bed and ambulatory, at the Verein Herz Station in Vienna.

The generally accepted incidence of heart disease in pregnancy is approximately one per cent. Concerning the method of handling of these cases, a wide divergence of opinion exists and more particularly regarding the indications for interruption of pregnancy.

One must bear in mind that the strained myocardium may manifest but slight evidences of distress during pregnancy or labor, only to go into complete collapse subsequent to labor—a matter of days, weeks or months. Accordingly those whose experiences have

dictated the dogmatic statement that most cases go through "normally" in spite of the heart lesion fall shy because: first, the cases observed are insufficient in number, and, second, the cases are not observed subsequent to delivery. Cardiologists agree that no matter what the heart lesion, slight or severe, the patient's life is shortened proportionately. This fact deserves repetition. The pregnancy is always fraught with danger and even the patient with the cardiac lesion regarded as most favorable, suffers to a certain extent.

The chief factors concerned with the breaking down of the circulatory equilibrium are as follows:

- (1) Tendency to an exacerbation of dormant endocarditis
- (2) Increased demands on the myocardium

*Read before the Obstetrical Society of the University Hospital, Baltimore, Md., October 18, 1926.

- because of the growing fetal circulation
- (3) Mechanical interference by the enlarging uterus with the venous return flow to the heart
 - (4) Interference with free movements of the diaphragm (which exercises an important role in helping to return the blood to the heart)
 - (5) Transverse displacement of the heart with bending of the great blood vessels
 - (6) The cardiac strain incidental to labor itself.

A so-called multiplication table, indicating cardiac lesions and the number of permissible pregnancies, was devised by J. Strickland Goodall, of London, and was used for several years at the Middlesex Hospital. A modification, which is somewhat more inclusive, is suggested. (Tables 1 and 2.) Obviously the tables represent only a rough working rule and are not to be taken literally.

Treatment—Certain problems of clinical practice which enter into the determination of the final decision present themselves. One is compelled to answer the question, "Can the patient's desire for a child be granted with a minimal risk to herself?" The time of pregnancy at which the patient is seen, that is, whether in the first three months or after the fourth month, is obviously of importance, because of the difference in gynecological procedure. Statistics based on study of large series of cases of reputable hospitals should be borne in mind. However, each case must be individualized and carefully observed. The problem of first importance, as emphasized by Mackenzie, is the evaluation of the efficiency of the heart muscle. This requires a careful history with particular reference to past attacks of decompensation and a thorough physical examination. The findings may be augmented by electrocardiographic and orthodiagraphic studies. In the main the degree of decompensation and the month of pregnancy (with the thought of obtaining a viable child), together, determine the type of procedure.

There is likewise no unanimity concerning the method of termination of the pregnancy.

At term in the doubtful cases, the restoration of compensation, followed by a quick Caesarean section and sterilization under local anesthesia or ether, and, in the less serious cases short etherization and application of forceps, as soon as considered safe, appear to the author as the methods of choice.

TABLE I—Pregnancies permitted in the following:

Group 1—Mitral Stenosis)
Auricular Fibrillation)
Heart Block)
Myocardial Degeneration)—0
Valvular lesions with)
nephritic or other)
complications)
Combined valvular)
lesions— aortic and)
mitral)
Group 2—Aortic Insufficiency	—1
Group 3—Mitral Insufficiency	—2

TABLE II—Cases in which pregnancy should be terminated:

- Group 1—Pregnancies occurring in the prohibited list of above, if patient is seen in first three months.
- Group 2—In exacerbation of an endocarditis occurring in first three months of pregnancy.
- Group 3—Severe cardiac failure or slight decompensation, persistent in spite of appropriate treatment, during the first three months of pregnancy.

REFERENCES

Frey, W.: Herz und Schwangerschaft, Verlag of Georg Thieme, Leipzig, 1923.
Campbell, D. G.: The Danger of Pregnancy in Heart Disease, Med. Clinic of N. Amer., P. 1867, May, 1924.
Schmidt, H. R.: Zur Bewertung der Herzfehler in der Schwangerschaft. Monat. für Geburtshilfe und Gynakologie, Berlin, P. 279, 1923.
Mackenzie, J.: Principles of Diagnosis and Treatment in Heart Affections, Henry Frowde, etc., London, P. 168, 1923.
Pardee, H. E. B.: Fitness for Pregnancy of Patients with Heart Disease, J. A. M. A. 78:488, April 23, 1923.
Neuhof, S.: The Heart, P. Blakiston's Son Co., Philadelphia, P. 463, 1923.

ACUTE SINUSITIS*

LOUIS NELSON WEST, M.D., Raleigh

The treatment of acute sinus disease is both medical and surgical. In a great majority of acute infections of the sinuses the patient will readily respond to medical treatment, because, it is possible in most cases to get proper drainage from the normal opening. This treatment will have to be carried on chiefly at the office, but supplemented by home treatment. All of the sinuses with the exception of the sphenoid have their drainage in the region of the middle turbinate bone. The openings are usually small, therefore a good part of the drainage takes place by siphonage. If these openings are clear, infection seldom occurs. As long as normal drainage and ventilation are present the infecting agent stands little chance with the mucosa of the cavity into which it has entered. Therefore, in any acute sinusitis it is our duty before advising operation, to free as far as possible the normal outlet, to evacuate the contained pus and to let in air. A sinus diseased, and treated by operation to the point at which the patient is discharged as cured, seems more liable to a reinfection than are sinuses in the same patient to become diseased which have not previously been affected.

Any deformity of the upper part of the nose which seriously hinders free drainage may act as a predisposing cause of sinusitis. This does not mean that all malformations are associated with sinus disease. But it does mean that sinus disease occurs more frequently in this type of nose. The negro with a broad nose seldom has sinus disease and when he does it is usually accompanied by syphilis, or is from direct extension of a dental infection. Malformations of the nose like deflected septum predispose to congestive troubles in general, and the sinuses are more liable to accident. After the inflammation has actually been established the deformity often increases the symptoms, makes treatment more difficult and prolongs the

attack. These very simple cases become so aggravated by lack of free drainage and by the increase of inflammatory symptoms due to pressure, that in spite of all treatment they become chronic. Congestive and hypertrophic conditions of the middle turbinate are other predisposing causes. Nasal polyps may be a cause of sinus disease through their influence in occluding the channels of exit of these cavities; however, it is generally conceded that they are far more apt to be the result of irritation from a sinus discharge, and it is not likely that they can be eradicated without the latter being cured. Any inflammation may extend directly to the sinuses from the nose or nasopharynx, as in children with hypertrophied adenoids in acute infectious disease. Suppuration of the sinuses may be associated with chronic diseases where the resistance is low as in tuberculosis. However, the infection here is due to the same causes as in other cases. But it is a matter of record that sinus cases are more frequent in tuberculous patients. It has been long known before oto-laryngology became a specialty that sinus disease has been due to dental irritation.

It follows operation on the nose and very often from any operative work in which the nose has to be packed. Sinusitis in children two years of age and over is common, and it can produce just as deleterious results as sinusitis in adults; furthermore, it may produce these results without presenting symptoms which would be suggestive of its presence. It is possible for a child to have a suppurative discharge that is swallowed. In fact it is seldom that children will expectorate. A much smaller discharge from an adult would give a history of post nasal dripping. I have seen recently an article by Coakly in which he states, "In a child without adenoids, and with a profuse nasal discharge the patient has sinusitis." He advocates, however, non-surgical treatment. Now in general, any disease or deformity that will cause inflammatory conditions in the nose will predispose to sinus disease. The treat-

*Read before the Medical Society of the State of North Carolina meeting at Wrightsville Beach, June, 1926.

ment is far from being perfected. The progress we are making is great, but we are far from the final ideal treatment.

No two cases can be treated the same way. The infection may be the same, but each patient reacts differently to treatment. All patients with acute sinusitis should have every chance for relief, with the least injury to the physiological functions of the nose. We should be more careful in our examinations. We have no right to rush through work. You cannot make a diagnosis of sinusitis by mere inspection of the nose. All suspected cases should have a complete physical examination. The nose should be inspected under cocain and adrenalin. A very careful history taken and all should be transilluminated and x-rayed. Bear in mind the easier the diagnosis the harder the cure. So time well spent in clearing up the simple more obscure conditions will save many a chronic case. The first symptoms of the invasion of the accessory cavities are not always recognized. So we may take for granted that in certain severe attacks of inflammatory disease of the nasal cavities, the sinuses must almost of necessity be involved. We cannot neglect acute colds and allow them to run their course. If we do, we increase the number of chronic sinus cases. If treatment is started early in all acute conditions of the nose, we know the number of cases coming to operation will be reduced.

The principles of treatment applicable to these cases are based on ordinary rules of common sense and experience in the management of inflammatory conditions in general. The patient should at the beginning of suspected sinusitis be put to bed and kept warm, magnesium sulphate or something similar given, fluids forced. Numerous drugs are recommended, but just what remedies are the most reliable in acute cases, each observer must determine for himself. Local treatment to the nose is the most important of all. But remember all treatment at this stage should be absolute non-irritating.

The nose should be sprayed with cocain and adrenalin followed with a douch of normal salt solution or a solution of bicarbonate of soda at a temperature of 110 F., then the nose coated with a spray of some soothing oil. This treatment should be done at home. Following the very acute symptoms the pa-

tient is allowed to come to the office for treatment. The treatment here is very similar to the above, only I add to this packing the nose with a 20 per cent sol. of argyrol, after being well cleaned, and then using negative pressure. This method provides drainage and ventilation to the sinuses, improves the tone of the mucous membrane and makes possible the avoidance of a large per cent of the operative procedures within the nose or upon the sinuses. These treatments are carried out daily at the office. I sometimes add to this stock vaccines, the stock vaccine being used on account of the length of time required for the making of the autogenous vaccine. Do not forget that these cases must drain through their normal openings and these should be kept clean. Push the middle turbinate toward the septum, if obstructing any of these outlets, remove polyps if present for better drainage. The septum at times will have to be removed, but in any or all of these operations do not pack the nose. Of the surgery of the sinuses, as of the drugs used in this condition, I have very little to say. Do the operation you have been doing, but remove nothing from the nose that has a physiological function to perform. I know all of you have seen cases in which the middle turbinates together with the ethmoid labyrinth, had been removed for a cure of what seemed to be at that time an ethmoiditis, which later proved to be an error in diagnosis and really was a maxillary sinusitis.

The order in point of frequency of infections of the nasal sinuses is:

- 1st. Maxillary
- 2nd. Frontal
- 3rd. Ethmoid
- 4th. Sphenoid.

I will feel that I have been justified in presenting this paper if for no other reason than to impress upon your minds the importance of prevention of sinus trouble and the early treatment of acute infections of the nose. Do not be satisfied with a diagnosis of sinus trouble by one inspection of the nose. Eliminate all possibilities of a maxillary or frontal sinusitis before you sacrifice the middle turbinate and the anterior and posterior ethmoid cells. The nose has a definite function to perform and when its structures are removed they cannot be replaced.

I realize fully that I have taken up all of my time telling you how to prevent sinusitis rather than how to cure, as the title of my paper suggests, but I feel that the treatment is more preventative than anything else, and therefore I will not apologize.

In closing, let me repeat:

Recognize early the conditions that predispose to sinus trouble, and if possible, remove them;

In children, remember adenoids are a very common cause of sinus disease, and that their removal usually brings about a cure;

Correct all deformities that have a tendency to cause obstruction, and guard the patient against the various exciting causes which may determine an acute attack; and finally,

Apply early treatment when acute inflammation is threatened.

Professional Building.

COMMON PROCTOLOGICAL CONDITIONS; THEIR DIAGNOSIS AND TREATMENT*

T. J. SUMMEY, M.D., Brevard, N. C.

The subject of proctology has become of such importance that special clinics are now devoted to this condition alone, and other important clinics have organized departments for treatment of rectal conditions. Volumes have been written on the subject, drug houses have marketed numerous remedies, quacks and cults have made fortunes treating proctological conditions. Some of these remedies and treatments have virtue; most of them have given only temporary relief, while others have done harm.

In this brief paper I shall discuss only a few of the most common proctological conditions that are found in the routine examination—the first and most common being hemorrhoids.

HEMORRHOIDS have an interesting history, having been mentioned by as early a writer as Moses, who said in referring to the disobedient children of Israel: Deut. 28:27—"The Lord will smite thee with the botch of Egypt, and with the emerods, and with the scab, and with the itch, whereof thou canst not be healed."

In the diagnosis of hemorrhoids one should first elicit a careful history, as this alone will usually give the clue. This should be followed by a complete physical examination and laboratory studies in order to ascertain whether the hemorrhoidal condition is pri-

mary or secondary to some other organic lesion, as cirrhosis of the liver, or any form of obstruction between the portal and systemic circulations. Rectal examination is usually the last part of the physical, and, being the last it is often neglected, due usually to carelessness but too frequently to a lack of appreciation of its importance.

Inspection: By a careful inspection of the anorectal region with the aid of a good light and with the patient in the proper position much valuable information can be obtained, such as,—inflammatory conditions of the skin and mucous membrane, tags of external hemorrhoids, external openings of fistula in ano, etc. The gloved index finger, which has been well lubricated, is then introduced into the rectal canal slowly and gently. One important point to bear in mind is that if the external sphincter contracts tightly around the examining finger there is usually some pathological condition in this region. With the examining finger one is able to palpate ulcers, irregularities of the canal, strictures, tumors and areas of infiltration. One of the leading proctologists of this country recently made the statement that ninety per cent of the carcinomata of the rectum can be palpated by the index finger. After this examination an anoscope is passed, which should cause very little, or no, discomfort. The rectum is then distended with air and by means of a small light the rectal walls may be inspected and gross lesions seen,

*Read at meeting of Tenth District Medical Society at Sylva, September 22nd.

As practically all anorectal conditions can be diagnosed without it, I shall not discuss the use of the proctoscope.

The treatment for hemorrhoids is divided into—prophylactic, palliative, and operative.

Prophylactic treatment requires attention to the general health, the correction of circulatory failure, outdoor exercise, proper food, prevention of constipation.

Palliative treatment consists of sedatives, enemas to relieve congestion, heat and local applications, and daily digital or instrumental stretching of the sphincter.

Operative treatment: The first important step is the preparation. The patient should enter the hospital the night before the operation; the evening meal is omitted; and an ounce of castor oil is given at six o'clock which usually acts early the following morning. This is followed by soap and water enemas until the flow returns clear, it sometimes taking from ten to twelve enemas. Forty-five minutes before the operation a hypodermic of morphine gr. $\frac{1}{4}$ and scopolamin gr. $\frac{1}{150}$ is given. The field of operation is prepared by shaving, cleansing and painting with 3 per cent solution of mercurochrome. The patient is taken to the operating room, placed flat on the abdomen, hips elevated upon a sand pillow. Caudal anesthesia, which is the anesthesia of choice, is induced according to the method described by Labot, using Labot syringes and needles or some modification of them. One hundred to one hundred fifty c.c. of $\frac{1}{2}$ of one per cent solution of novocain with six drops of 1:1,000 adrenalin to 100 c.c. is used. A wheal is first made over the sacral hiatus. This, usually is not difficult to find in thin individuals; however, as in doing a lumbar puncture—it is not always easy. The hiatus is located by drawing lines from the posterior iliac spines to the margins of the left and right sacro-coccygeal joint. Where these lines converge one usually finds the hiatus. 10 c.c. of solution is injected into the sacro-coccygeal membrane. This needle is removed and a spinal needle which contains a stylet is passed into the sacral canal. The stylet is removed and the needle is connected with a syringe. Before introducing the solution the plunger is pulled back to be sure that the needle is not in a blood vessel. The solution is then slowly injected into the ca-

nal, palpating with the left hand over the sacrum to be sure that the solution is not infiltrating into the tissues. Forty to sixty c.c. of the solution is injected into the canal. After this, the sacral foramina from the second to the fifth on each side are injected, using as a rule 10 c.c. for the second, 5 c.c. for the third, 4 c.c. for the fourth and 3 c.c. for the fifth. After the injections have been made it is very important to wait and test areas for dullness and sharpness until one is sure anesthesia is complete. The index finger is then dipped into a 3 per cent solution of mercurochrome, which acts as a lubricant as well as an antiseptic, and the sphincter is gently dilated but not divulsed. Forced dilatation, which is thought by some surgeons to be an important procedure, is not necessary. It relaxes the tissues so much, causing dilatation of the veins which have no valves in this area, that where two or three hemorrhoids were present there now appears to be a large increase in the number and there is a tendency to remove more tissue than is necessary which tends to result in stricture. Last, but not least, forced dilatation is the cause of most of the post-operative pain.

Numerous operations have been described, most of which give excellent results in the hands of men specializing in this work. I prefer the clamp and ligature method. The hemorrhoid is caught with a clamp or curved hemostat, a ligature is placed around the base, going deep enough to be sure that you have the vessel, as the main object is to catch the vessel rather than the removal of the tumor. The tumor is next excised, being careful to make the line of incision at the junction of the skin and anal margin, and the raw surface closed with continuous catgut suture. If a large amount of skin is removed the rectal mucous membrane is pulled out over a considerable area for approximation with a tendency to lengthen the anal canal so that after healing is complete the patient sits on the rectum. There is no operation with which I am acquainted where conservatism is more important. It is far better to leave a couple of hemorrhoids untouched than to go too far with this operation. Dr. Gant in a recent edition condemns the Whitehead operation, and states that it is often followed by stricture of the rectum. Clamp and cautery has two objections: first, hem-

orrhage sometimes follows; second, stricture of the rectum is common following this method.

Following the operation 10 c.c. of quinine and urea is injected into the operated area, which prevents most of the post-operative pain. A small strip of iodoform gauze is then placed in the rectal canal, the wound dressed, and the patient returned to his room. The patient is kept on liquid diet for five days, at the end of which time an oil enema is given and the bowels allowed to move, if they have not moved previously. The bowels are not tied up by opiates as the pain can usually be controlled by hot applications. Following each bowel movement for at least two weeks, the patient is required to take an enema. The wound is dressed daily and mercurochrome applied. Parts are kept as dry as possible by sterile cotton which is worn at all times and changed as often as necessary. Digital dilatation with the forefinger is done daily from the seventh to fourteenth days, every other day from the fourteenth to twenty-eighth day and weekly up to the eighth week.

ANORECTAL FISTULA: This is a very common affliction and is seen perhaps more often by specialists in this field of surgery than any of the other rectal conditions. This is an annoying rather than painful condition, usually following an infection of the crypts. Previously this was thought to be tuberculous in origin; however, Dr. Bouie, of the Mayo Clinic, stated that their statistics showed that only three per cent of these fistulae are due to tuberculosis, and his personal opinion was that not more than one per cent was due to tuberculosis, and when tuberculous the lesion could be demonstrated elsewhere in the body. In the diagnosis of fistula the same methods as described in hemorrhoids are used. Preparation and anesthesia are the same. Operation consists in excision of the

fistulous tracts with the surrounding necrotic tissue. Practically all fistula openings enter the rectum between the internal and external sphincters. The operation is simple and easy when there is only a single fistula to deal with, but difficult and complicated when complex fistulae exist. The entire fistulous tract is packed with iodoform gauze which is not removed for a period of five days. Packing is then removed and the wound treated with mercurochrome. For ten days to two weeks the wound is dressed daily and mercurochrome applied, wound being kept open by gauze. Daily enemas should be given for at least two weeks as in the post-operative care of hemorrhoids.

FISSURES: Fissures of the rectum are very common and cause a great deal of pain. The same methods are used in the diagnosis and preparation as in the preceding conditions. Anesthesia may be either local or caudal. The treatment is operative. Incision is made through the external sphincter, and in cases of long standing where there is much induration incision is carried through the fibers of the lavator ani muscle. The fissure is next laid wide open and all granulating and necrotic tissue removed. The wound is packed with iodoform gauze. By cutting the sphincter and putting the area at rest, pain is relieved and fissure usually heals readily.

In conclusion, I wish to emphasize these facts:

- (1) Most cancers of the rectum can be palpated by the index finger
- (2) Ruthless operation is the most frequent cause of stricture of the rectum
- (3) Syphilis causes less than ten per cent of fistulae
- (4) Fistulae are seldom due to tuberculosis.



SOME OF THE MORE IMPORTANT COMPLICATIONS OF PREGNANCY AND THE LYING-IN STATE*

With a Note on the Use of Pituitrin

C. Z. CANDLER, M.D., Sylva, N. C.

It occurred to me that a few remarks with reference to the care of obstetrical cases as seen by the general practitioner might be of some benefit to those of us who handle such cases in connection with our other work. Unlike our city brethren, we are often handicapped by reason of a lack of facilities necessary to cope with many serious conditions, notable among which might be mentioned instrumental deliveries, the so-called eclamptic state and post partum hemorrhage. Functional tests and pelvic measurements are methods rarely employed by the rural physician. In an experience running back over a period of twenty-five years, during which time I have had occasion to attend many hundred obstetrical cases, I have found that in the vast majority of them no engagement for the services of a physician would be made until the advent of labor. In such instances we are compelled to cope with whatever abnormality or functional derangement that may be in store for us. In more recent years, however, the laity is coming to realize the importance of frequent urinary analysis and blood-pressure estimations. The result of attention to these two important procedures is shown by a marked reduction in the number of cases of eclampsia coming into the hands of the physician.

Eclampsia: To my mind an attack of purpurial convulsions is one of the most fearful conditions with which the physician comes in contact. The involuntary spasm and twitching of the facial muscles, with bloody froth running from the corners of the mouth, the head retracted and the limbs rigid, and that peculiar stare never seen in any other condition. I have seen cases where the tongue was almost chewed off because the family did not know to place something between the teeth.

The treatment of eclampsia resolves itself more into a question of prevention than that of cure. Frequent and careful analysis of the urine after the seventh month of pregnancy will almost always show evidences of an approaching danger. Slight traces of albumin, with now and then a few casts, means we have a degenerative process going on in the kidneys. If in addition we get a systolic blood-pressure at or above 150, with frequent attacks of severe headache, we may be reasonably certain there will be trouble ahead if the condition is not relieved. Good-sized doses of the citrates, cream of tartar in lemonade, and moderate doses of epsom salts at bedtime will usually clear up the symptoms of toxemia. Such patients should be closely watched, however, and at the first appearance of symptoms, immediate treatment should be instituted. On the theory that the toxemia is due in many instances to an overacting and crippled liver, resulting in a carbohydrate deficiency, glucose and insulin have been used with good results. With this treatment I have had no experience.

The question of interference with pregnancy is a more or less unsettled one. In the presence of convulsions, some advocate immediate evacuation of the uterus, while others are more conservative. In the cases I have seen, where dilatation was mostly complete and the child engaged, I have never hesitated to empty the uterus. In some of these cases the convulsions have ceased, while in others they did not appear to be influenced. On the other hand, with no dilatation nor engagement, I have always been inclined towards conservatism, the treatment being that of elimination and support.

Sepsis: This condition is far more infrequent than in former years, although even at the present day I think we see too many cases. Absolute cleanliness, both on the part of the physician and patient, is the only sure means by which such infection can be pre-

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vented. Few vaginal examinations during delivery, and staying clear of the vagina and uterus, both with the hands and douches, afterwards, will carry the patient a long way toward an uncomplicated recovery from her confinement. Lacerations should never be neglected, as they are a frequent source of infection.

In the treatment of sepsis, there is nothing truer than that we should follow the teaching of the old adage, "An ounce of prevention is worth a pound of cure." I have had occasion to treat two cases with intravenous injections of mercurochrome (1 per cent sol.), with one recovery. I have also used the various serums recommended for the condition, but after all has been said and done I believe a general supportive line of treatment yields as good results as any.

Hemorrhage of sudden onset, and usually when everything has gone well during the labor, may reach alarming proportions within a very few moments. I believe its most frequent cause is a long, tedious labor and the too early removal of the placenta. The third stage of labor should never be less than thirty minutes. The man who delivers the afterbirth immediately after the child will sooner or later regret it. My own experience has taught me never to interfere with the process of uterine retraction that follows immediately the second stage of labor. There are some who recommend the administration of ergot during the third stage, but having had the misfortune of seeing a few cases of hour-glass contraction during my time, I rarely employ it. If pituitrin has been given during the second stage, we need have but little fear of hemorrhage. I do not mean, however, that we should not keep a close lookout for it, no matter what has been done

nor how well the patient is feeling.

The use of pituitrin in obstetrics is a matter about which there is much difference of opinion. Producing as it does prolonged and violent contraction of the uterine muscles, it is an agent capable of doing much damage unless administered in carefully selected cases. In other words, when there is any hindrance to the passage of the child, such as insufficient dilatation of the cervical canal, contracted pelvic outlet or an abnormal presentation, it should never be given—even in the smallest dosage. I remember the case of a woman who was given a good-sized dose in a shoulder presentation. I saw her in consultation several hours afterwards. The uterus was in such a state of tonic contraction it was impossible, under deep anesthesia, to insinuate the fingers between the uterine wall and surface of the child. Version was therefore out of the question, and in order to save the woman's life a Caesarean section was performed. The child was dead, but fortunately the mother recovered. This case illustrates very clearly the danger incident to the administration of such an active agent without first ascertaining the true state of affairs.

Good roads, modern methods of travel and the telephone have gone far towards making the practice of medicine in the country a pleasure. The days of horseback and saddle bags are over, and instead of the doctor spending about four-fifths of his time getting to and from his patients, it can be more profitably utilized in his library or at home with his family. He keeps in closer touch with his patients; can, as a rule, see them on short notice, and in many instances can get to and relieve them of serious conditions, when in former years many lives were sacrificed for lack of immediate attention.



THE GENERAL PRACTITIONER AND THE CHILD WITH SQUINT*

V. K. HART, M.D., Statesville

From the Department of Head Specialties, Davis Hospital

This subject is being presented from the standpoint of the general practitioner; not that of the specialist. With this idea in mind unnecessary technicalities will be avoided and this, it is hoped, will augment the interest.

If the problem is presented in too elementary a manner forgiveness is asked. Better to be too fundamental than too technical. It is the fundamentals in which the doctors outside the specialty are interested.

Very often the family physician is the first one to whose attention the squint is called. It is he in such instances who must advise the family. Proper advice at this time means much to the future of the child.

The baby with strabismus is first considered, the condition commonly being first noted about the end of the first year. Very few children are born with a squint. If truly congenital, it is usually the result of paralysis of one or more of the ocular muscles and the prognosis is poor.

Why should a squint manifest itself in early childhood? This brings up the basic etiology.

The majority of squints are of the convergent type. Whether convergent or divergent squint may be monocular; i. e., the child constantly fixes with one eye, letting the other deviate. The other variety is the alternating in which either eye fixes. When the visual axis of one eye turns, the other eye fixes on the visual object. Both never fix at the same time.

The common cause of squint of the convergent type in a baby is a high degree of far-sightedness with or without a complicating astigmatism. The author has seen three such cases in one family, showing the strong influence of heredity; not the squint being inherited but the far-sightedness. Such an error brings all the strain on near work.

Babies soon become curious concerning objects about them. They focus on close objects by using the ciliary muscle which flattens or bulges the lens, so to speak. The third nerve supplies this ciliary muscle and also supplies the internal recti. Consequently when the child over-accommodates for near objects, and this is done to bring the object from behind the retina onto it, the internal recti are unnecessarily innervated at the same time. However, if both eyes over-converge concomitantly, imperfect binocular vision results because the rays of light are thrown off the sensitive part of the retina. Tersely expressed: the amount of accommodation necessary to give clear vision causes too much convergence. Consequently only one eye is used at a time and the other is allowed to turn in order to suppress the image in this eye. Evidently it is not so easy to over-accommodate when fixing with just one eye. At any rate, due to the error, imperfect muscle balance results and a squint ensues.

There are other causes of squint. There may be a difference in the vision of the two eyes, but this really comes under refractive errors. A third and most important reason is a lack of development of the fusion faculty. The writer has seen this classically illustrated in a hydrocephalic child. The trouble in such a case is central, with disturbance of innervation.

This latter reason probably explains why some children with only a small refractive error will develop squint, while children with larger errors have little obvious trouble. A child was recently seen with a tremendous error (9 diopters hyperopia). There was no squint. However, in this instance the reason was evident. The error was too large for the child to correct and he therefore did not try. The neuropathic constitution of the child is therefore a factor.

The foregoing discussion is taking the subject too much into the realm of the specialist,

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This paper is not written from the specialist's viewpoint.

What advice then is the family doctor to give the parents of such a child? By all means the consultation of an eye man should be sought. The only therapy of any value in the first two or two and one-half years is atropin. Its judicious use is sometimes helpful for paralyzing the nerve endings of the third nerve and preventing the child from over-accommodating. By occluding the good eye intermittently with a pad the patient may be forced to use the non-fixing eye, if the strabismus is of the monocular type. It is to be remembered that visual acuity develops only with correct use.

The proper glasses are not fitted until two and one-half or three years of age. At this time this is done by means of a retinoscopy; i. e., light reflected by a small mirror into a dilated pupil. The refractive error can be very accurately determined in this manner. This estimated, the proper glasses are fitted. These in no way affect the muscles. They merely relieve the overwork and the condition may thus gradually right itself. A year ago the writer saw a three-year-old patient with a very bad squint which has since entirely cleared with proper correction of the refractive error.

If at the end of a year the strabismus shows no marked improvement operative work may be considered. This is of two types. Either the external rectus is advanced or a partial tenotomy is done on the internal muscle (complete tenotomy is never justified). One or both eyes are operated depending on whether the squint is monocular or alternating.

The doctor should impress the family with one vital fact. They should be willing to place the child under a specialist's care for two years if necessary. Very often one operation does not suffice and many times it takes five or six. However, all of these children can be improved, and many cured.

Another important fact should be impressed on the parents by their physician. Binocular vision, the ability to use both eyes on the same object at the same time, develops in the first six years of life and rarely after that. How important it is then to have the child brought under treatment early.

If operative work is necessary it can be

done with little risk to the eye. A North Carolina man, Dr. Briggs, of Asheville, has perfected a very simple advancement operation. It has many advantages and in the author's hands has been extremely valuable. This fact is briefly mentioned because credit should go to those who deserve it.

A few cases are mentioned to illustrate what can be done and to show what many eye men are doing.

Case 1. Girl, aged seven. Convergent strabismus, right eye fixing. Amblyopia left. Ten degree squint left. Advancement external rectus left by Briggs' method. Result excellent. No further operative work necessary. Moderate far-sightedness corrected by proper glasses.

Case 2. Woman, aged twenty-four. Convergent squint, right eye fixing. Amblyopia left. Ten degree squint left. Advancement left external rectus by Briggs' method under local anesthesia. Result excellent. No further operative work necessary. Far-sighted astigmatism corrected by proper glasses.

Case 3. Girl, aged six. Convergent squint, right eye fixing. Forty degree squint. Under general anesthesia partial tenotomy of the left internal rectus done, and advancement of the left external rectus by Briggs' method. Five months later another combined tenotomy and advancement was done, this time under local anesthesia. Result excellent. No further operative work necessary. Moderate far-sighted astigmatism corrected by the proper glasses.

Case 4. Girl, aged twelve. Alternating squint of twenty-five degree each eye. This is the most difficult type to handle. Combined tenotomy and advancement by Briggs' method was done on each eye. This is more than usually done at one sitting. The result was excellent. After operation she had a slight divergent alternating strabismus of five degrees. This, then, represents an improvement (if it may be so expressed) of 120 per cent; that is a slight over-correction which in this type is more desirable than under-correction. She now has a slight d'plopia for distance because binocular vision has never developed. It is hoped by the proper use of muscle exercises to overcome the residual squint, and establish fusion vision. This is rarely done after six years

of age. If this attempt is unsuccessful, her appearance at any rate has been vastly improved. Moderate far-sighted astigmatism corrected by proper glasses.

These few cases have been cited from the writer's records to show what can be done by patient work with these children. Such measures have a tremendous influence on the future of the child.

SUMMARY

1. These children should be brought under

the observation of an eye man as soon as a strabismus develops.

2. The parents ought to know that the child can be improved and possibly cured.

3. The family physician should also emphasize the fact that it may take several years of observation and treatment.

BIBLIOGRAPHY

1. De Schweinitz, Geo. E.: *Disease of the Eye*. Ed. 9, Phil. and London, W. B. Saunders Co., 1921, pp. 597 and 604.

THE PRACTICAL USES OF PHYSIOTHERAPY*

Report of Cases

J. R. ALEXANDER, M.D., Charlotte

Dr. Harry Yeaton Stewart, attending specialist in physiotherapy, United States Public Health Service and United States Veterans' Bureau, says: "The time when the term physiotherapy meant baking and massage is over. The advance in the scientific application of physical therapeutics in the last decade is perhaps greater than that which was made up to that time. In the Medical Corps of the great armies of the late war for the first time in the history of medicine a large number of regularly trained physicians devoted their entire time and attention to various branches of physiotherapy."

Dr. Stewart further says: "In the American Army we were able to institute a department of physiotherapy which functioned in fifty-two different hospitals, was comprised of over two hundred physicians and twelve hundred reconstruction aids. The personal backing of the surgeon general and the organization department of his office under Lieutenant Colonel Frank B. Granger, of Boston, brought together a personnel and equipment the like of which had never existed. From 1918 to the end of 1922, millions of physiotherapy treatments were given to the service and ex-service men by the Medical Department of the Army, Navy, United States Public Health Service and Vet-

erans' Bureau. The results on the whole were extremely gratifying and by reason of the vast amount of data collected we men feel that physiotherapy is on as firm and proven scientific basis as any other branch of medical practice." It can not be too strongly insisted upon that with a few minor exceptions, physiotherapy is not a complete regimen of treatment, but is an adjunct to the routine, hygienic, medical and surgical care of the patient. Fortunately, there are practically no contra-indications to the employment of accepted methods of physiotherapy in any given case. The electric currents are employed in accordance with three main effects on living tissue: first, change in chemistry; second, mechanical action, and third, the production of heat.

In the first division falls the straight, galvanic current and we use it to reorganize the ions in the tissue and to drive in ions from without, to destroy tissue with their caustic concentration and to allay nerve pain.

In the second group are found the interrupted and waved galvanic and sinusoidal currents, used for the contraction of muscle completely or partially deprived of its nerve supply and to stimulate other functions by muscle contraction. The high frequency currents of Oudin and Tesla produce superficial and to a certain degree deep heat, relieve pain and stimulate metabolism, or destroy by fulguration when localized at a needle point,

*Read before the Seventh District Medical Society at Shelby, October 12, 1926.

Diathermy, which is one of the most powerful agents in all the field of medicine, creates an intense, deep seated heat, localized at will, with a subsequent active hyperemia which greatly reduces repair time and aids in the resistance to localized infection. Its general effect in lowering hypertension, decreasing pain and promoting general metabolism is also made use of. Radiant light and heat stimulate the circulation, relieve pain and promote repair. Ultra-violet light has both a local and general effect. Locally, it is one of the most powerful of antiseptics with no effect upon the host other than the destruction of superficial epithelium when used in heavy dosage. Most localized infections yield readily to its application in their early stages. In moderate amounts it is a very powerful stimulant to skin cell growth, and is indicated in slowly healing wounds and ulcers of the skin. Generally, it is the same tonic to the body that sunlight is; enriching the hemoglobin and the fighting property of the blood, increasing metabolism and inducing sleep.

In my opinion, for a physician to practice physiotherapy successfully there are four essentials: first, diagnosis; second, knowledge of the physical action of the different modalities upon human tissue; third, equipment; fourth, practical application and their therapeutical uses of the different modalities.

Unless you can find out the cause and remove it the chances are that whatever relief you may be able to give the patient will be only temporary. We must be sure of what is causing the arthritis or neuritis and, if possible, remove the focus of infection, whether it be in tonsils, teeth, sinuses, bladder, intestinal tract, (including the liver), gall bladder, colon, prostate, seminal vesicles, uterus, ovaries or tubes,—the differential diagnosis is essential. But how often do we hear a physician say that my patient with arthritis or neuritis had his or her tonsils removed and out of abundance of caution I have had his or her teeth extracted, as if the tonsils or teeth were the only sources of infection.

You will notice that I place the knowledge of physiological effect on the human tissues in advance of equipment, and I think it should be. Before one buys equipment he should at least have a fair knowledge of

physical effect of the modalities he is contemplating purchasing. If he has this knowledge of what he expects to do with the different modalities he will know what he wishes to purchase and as he becomes better acquainted with the physiological effects and the uses of the different machines he can add to his equipment. One word of caution. Never buy cheap apparatus. Always buy the best.

As to the practical application and therapeutic use of the different modalities; this must be acquired. The best way of acquiring it is by attending a physiotherapy clinic or with a physician who is practicing physiotherapy, and then I do not think it is best for any one to try to treat all the cases that may be amenable to physiotherapy, but each physician should decide for himself what cases he is most capable of handling. Do not use physiotherapy upon a patient where a surgical operation is best for him. I can best illustrate by reporting two instances; a patient came to me for treatment, suffering excruciating pain in shoulder and arm. Upon examining him I found that he had badly diseased tonsils and told him whatever relief I might be able to give him would be temporary, and that he must have his tonsils removed and what infections he might expect if he did not. He replied that he was going to keep them, that he had a friend who bled to death from the removal of his tonsils; but that I could take them out with high frequency by coagulation. I informed him that tonsils could be removed by diathermy but that I was not a throat specialist and regardless of what method was used a tonsillectomy should be done by a throat specialist. The next day he returned to inform me that he was going to follow my advice and have his tonsils removed. A few days later a patient, living in a neighboring county, was sent to me by the family physician, suffering with a malignant growth of the hand. The patient said her physician said he could remove it, but that he was afraid it might return but that if it was done thoroughly by coagulation he did not think it would.

ILLUSTRATIVE CASE REPORTS

Ankylosed Wrist—Man, aged 28, referred by Dr. M., who gave the following history:

Three months previous patient sustained a

Colles' fracture by being kicked while cranking a car. The patient had immediate attention. The splints were adjusted twice during the next four weeks. At the end of that time the splints were removed and union was good, but patient began suffering with pain and the wrist joint was found to be ankylosed with very little flexion and extension and no pronation or supination. Radiant heat and massage were used without benefit. At the end of two months the patient was referred to me. The apposition and union were found to be good, with almost complete ankylosis with not more than 10 per cent flexion and extension, which caused severe pain, but no pronation or supination. Diathermy was used, applying one electrode to the dorsal portion of the forearm and hand immersed in a pan of water to which the indifferent electrode was attached, giving about 500 milliamperes for thirty minutes for each treatment, followed by massage. At first three treatments were given a week, then two a week; the condition yielded readily to the treatment and at the expiration of two months the patient had a useful hand, having full flexion and extension and almost complete pronation and supination. We used, in all, seventeen treatments. Patient called in to see me a few days ago and said he was driving a tractor and seldom had any pain.

Sciatica—Woman, aged 40, married, 11 living children.

Referred by Dr. C., who was treating the patient for diabetes. The patient was suffering with severe pain in the left sacro-iliac synchondrosis and the sciatic nerve on the same side and cramps in the calf of her left leg, had been unable to do even light house work for several weeks. Leucorrhea observed for the past 18 months and examination revealed a cervico-endometritis with a purulent discharge from the cervix. The patient was put upon diathermy to the pelvis, by using a vaginal electrode in the vagina and the indifferent electrode on the abdomen just above the pubes and one 3x12 electrode over the sacro-iliac synchondrosis and the sciatic nerve. The temperature in the vagina was raised to 106 and 108. This was taken by a long thermometer, not in the vaginal electrode, but in the vagina by the electrode, which, I think, is far better than the temperature of the electrode, as it is the tem-

perature of the tissues that we want. These treatments lasted from 30 to 45 minutes and were followed by general body ultra-violet ray. At first the treatments were given every other day, then twice a week, afterwards once a week. The ulcers on the cervix were coagulated, using the Oudin current. Ionic medication was applied to the cervix and vagina by packing the vagina with cotton saturated with a 2 per cent zinc sulphate solution, with positive pole in the vagina and negative on the abdomen, of the galvanic current. The endometrium received ionic medication by the use of copper electrode in the uterus, connected to the positive pole and the negative to the abdomen. The leucorrhea has stopped and the patient reports that she has been free of all pain for several weeks.

Back-ache—Woman, aged 68.

History of having suffered for several weeks with severe pain in sacrum and coccyx, could not sleep under the influence of an opiate. Diagnosis, proctitis. Direct diathermy to the sacrum and coccyx with the indifferent electrode to the abdomen, preceded with radiant heat and followed by general body ultra-violet ray. I also used in some of the treatments with this patient the non-vacuum high frequency electrode in the rectum, which gave most excellent results in relieving pain. In two weeks patient was entirely relieved of pain and a few days later went to the mountains. While there the pain returned. Upon her return home she came to my office and I removed two hemorrhoids by coagulation, which, it seems, was the exciting cause of the proctitis. She suffered little inconvenience from the operation, not having to go to bed.

Traumatic Psychosis—Widow, aged 57, no children.

Referred by Dr. Mc.

In September, 1925, was attacked by a dog, fell and broke arm and injured spine. In January she had another fall, injuring the spine again, developed severe pain in spine and legs, could not walk. At the end of four months was brought to the Presbyterian Hospital and remained in the same condition for two months. Was referred to me on July 7th, being brought to my office in a chair and on account of pain had to be lifted with a pillow to her back; pressure to spine would

produce severe pain. Patient was placed on table with face downward and all clothing removed and was found to be in a very emaciated condition, weighing less than seventy pounds, highly nervous. I am free to admit that on account of her physical condition I gave her the first treatment with great reluctance. We placed a long electrode over the dorsal and cervical portion of the spine and a large indifferent electrode to chest and abdomen, giving her 800 milliamperes of diathermy for twenty minutes, followed by general body ultra-violet ray. She stood the treatment fine and came for treatment every day except Sundays, for two weeks, then three times a week. Her improvement was rapid, she could walk a little in a week, at the end of a month could go all over the hospital by herself; later on she climbed two flights of stairs at the hospital, and had a severe attack of pain in the sternum running out into the left arm, which simulated angina pectoris. The patient was put to bed for ten days and at the end of this time still was uncomfortable, but had no acute pain. B. P. 170. The patient resumed treatments. This time she was placed on auto-condensation pad with the electrode over the sternum and epigastrium. This was followed by general body ultra-violet ray. She felt more comfortable after the treatment and blood pressure was lowered and patient is again improving nicely.

Pelvic Abdominal Adhesions—Mother of one child, aged 36. Has had six laparotomies in the past four years,—first an appendectomy, second a hysterectomy for fibroid uterus (the cervix, ovaries and tubes were left), and the other four for sequelae, including ventral hernia.

The patient was suffering a great deal of pain in pelvis and abdomen from the hernia, adhesions, etc. Referred to me by Dr. S. She said for the past six months she had been having very severe attacks of pain, at first they were not so frequent but of late she would have two or more attacks a week and nothing but a hypodermic of morphia would relieve the pain and sometimes it took two or three hypodermics to give relief. The pain was largely in the lower part of the abdomen. Upon digital examination the mucous membrane of the vagina was found not to be soft and smooth, but rough and the folds cord-like; both ovaries painful to the touch. Pa-

tient came in search of relief from the attacks of pain. My diagnosis was adhesions and defective circulation were causing the pain. Both medicine and surgery had failed to relieve the condition. The question was, what physical means would be of value. First, we turned to diathermy, also a physical agent in adhesions is galvanism and in connection with it ionic medication. Therefore, in this case we used both diathermy and ionic medication. Chapman's vaginal electrode was used in the vagina and a 6x8 indifferent to the abdomen just above the pubes, raising the temperature of tissues to 106, keeping this temperature for about 30 minutes. We also used the ionic medication by the galvanic current, the positive pole on the abdomen and negative in the vagina, as it liquefies, is a vaso-dilator and drives in negative ions, such as salicylate of soda and sodium chloride, both of which were used in this case. After using diathermy and ionization, general body ultra-violet ray was used for the sedative and tonic effect. The attacks began to grow less severe. Upon digital examination we found the ovaries less painful, the mucous membrane became soft and smooth, the cord-like folds disappeared, but the cervix stump became very sensitive to the touch. This evidently was from over stimulation, caused by the negative pole of the galvanic current and by the medical ionization. You will remember that the negative pole is an irritant and the positive pole a sedative. Therefore, we reversed the order, putting the negative on the abdomen and the positive in the vagina with the cotton saturated with 2 per cent sulphate of zinc solution, which gave almost immediate relief. The patient has not had any pain in the pelvis or lower abdomen for about ten weeks, but has had two attacks of pain in the cardiac end of the stomach, supposed to be from adhesions. We have used through and through diathermy and ionic medication, using salicylate of soda and at other times sodium chloride, from which we are supposed to drive in chlorine gas. A week ago the patient told me that she had had but one hypodermic in eight weeks. She is a woman of a great deal of energy and loves to take an active part in social and church affairs, but for many months had been unable to go even to church. For the past six weeks she has

resumed her usual activities and is today as happy and as appreciative a patient as we ever see. I hope that no one will misunderstand me. This patient is not entirely relieved of adhesions. I think she is relieved of the pelvic adhesions. There is at least one adhesion in the abdomen to which we have given but few treatments. That we have not been able to overcome, but feel sure that we are going to do so.

In conclusion let me say that it should be the ambition of a physician practicing physiotherapy not merely to give treatments, but to treat patients and cure them of disease. Do not buy an ex-ray machine with the idea that it will make your diagnosis. It can not.

Do not buy a diathermy cabinet, thinking it will treat your patients. It will not. Do not buy an ultra-violet lamp, with the thought that you will use it for its psychological effect upon your patients. "In the beginning God said 'let there be light' and there was light." And in that light was put the ultra-violet ray, which ever has been the greatest germicide, and the greatest healer and preventative of disease. Does it not behoove us to keep the use thereof on a high plane? In order to do this we should surround ourselves with the best and latest literature, and study earnestly the therapeutic uses of light, heat, and electricity.

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- (1) Parents should call a physician immediately whenever a child has a sore throat.
 - (2) Physicians should give antitoxin without waiting for a culture report whenever the clinical findings arouse a suspicion that the case may be diphtheria.
 - (3) The initial dose of antitoxin should be large enough to protect.—Ed. in *Boston M. & S.*, Nov. 4.



PRESIDENT'S PAGE

Tri-State Medical Association of the Carolinas and Virginia

A. J. CROWELL, M.D.

The Clinical Tour through South Carolina, which was outlined last month in this journal, was made according to program and on schedule time. There were about fifteen visiting physicians in the party, every one of whom expressed himself as greatly pleased. (Sorry more could not have been with us.) Eight or ten of the Spartanburg doctors went with us to Greenville for their luncheon and scientific meeting. There was a full attendance of the membership of the County Medical Societies at every place visited in both the scientific meetings and clinics. The papers were unusually good and the clinics equal to any I have ever attended. Think of it! Right here at home, given by our own men, too, and at practically no cost! Left home after our day's work Tuesday afternoon, back home Friday at 7 p. m. and attended four excellent scientific meetings and three wonderful clinics in four of South Carolina's largest cities. Good roads obliterate distance and make such trips practical as well as very desirable.

Our trip confirmed our own convictions that such a clinical organization should be

perfected and fostered by the Tri-State as outlined in the President's page previously. I am sure such is the belief of the members of the profession in the cities visited as well as those of us who made the trip. This clinical organization should be to these three states what the Southern Surgical is to North America. Its membership should be limited, the organization, self-perpetuating and replenished by invitation from the Tri-State. This will stimulate a greater desire to do good work in the Tri-State in order to be in line for promotion.

This brief message is given in order that you may study the proposition carefully and go to the Columbia meeting in February prepared to vote intelligently on the proposition. If you are opposed to the movement, go prepared to give expression to the faith that is within you and vote accordingly and, if in favor of it, be likewise prepared. The subject certainly will be up for decision. If not a member, join and get in line for promotion should the organization be perfected, as well as to have the privilege of voting for or against such an organization.



PRESIDENTS' PAGE

Medical Society of the State of North Carolina

JNO. Q. MYERS, M.D.

A practice that is laying the foundation of a vast amount of disease and of even more serious evils, is the free use of poisonous drugs. When attacked by disease, many will not take the trouble to search out the cause of their illness. Their chief anxiety is to rid themselves of pain and inconvenience. So they resort to patent nostrums, of whose real properties they know little, or they apply to a physician for some remedy to counteract the result of their misdoing, but with no thought of making a change in their unhealthy habits. If immediate benefit is not realized, another medicine is tried, and then another. Thus the evil continues.

People need to be taught that drugs cure disease only in a few instances. It is true that they generally afford relief, and patients appear to recover as the result of their use; this is because nature has sufficient vital force to expel the poison and to correct the conditions that caused the disease. Health is recovered, but not because of the drug. In most cases the drug only changes the form and location of the disease. Often the effect of the poison seems to be overcome for a time, but the results remain in the system, and work great harm at some later period.

By the use of poisonous drugs, many bring upon themselves lifelong illness, and many lives are lost that might be saved by the use of natural methods of healing. The poisons contained in many so-called remedies create habits and appetites that lead to ruin. Many of the popular nostrums called patent medi-

cines, and even some of the drugs dispensed by physicians, act a part in laying the foundation of the liquor habit, the opium habit, the morphine habit, that are so terrible a curse to society.

I think that to have known one good, old man—one man, who, through the chances and mischances of a long life, has carried his heart in his hand, like a palm-branch, waving all discords into peace—helps our faith in God, in ourselves, and in each other more than many sermons.

G. W. Curtis

That we should do unto others as we would have them do unto us—that we should respect the rights of others as scrupulously as we would have our rights respected—is not a mere counsel of perfection to individuals—but it is the law to which we must conform social institutions and policy, if we would secure the blessings and abundance of peace.

Henry George.

Credulity is of the very essence of human nature and we physicians are not exempt from the common lot. Our work is an incessant collection of evidence, weighing of evidence, and judging upon the evidence, and we have to learn early to make large allowances for our own frailty, and still larger for the weaknesses, often involuntary, of our patients. The history of medicine is full of instances of self-deception on the part of the best of men. Science has done much in revolutionizing mankind but man remains the same credulous creature as he has been in all ages. Tar-water, Perkin's tractors, laying on of hands, christian science, Lourdes, and the other miracle-working shrines illustrate the deep, intense credulity from which science has not yet freed mankind and is not likely to do so. It is an aspect of human nature which we must accept and sometimes utilize, remembering the remark of Galen: "He cures the greatest number in whom most men have most faith."

Osler.



SOUTHERN MEDICINE AND SURGERY

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Published to make the average doctor better than the average; to improve his information, his usefulness, his standing and his income.

THE TRI-STATE IN SOUTH CAROLINA

In the news section there is an account of the visit of a delegation seeking to represent the Tri-State Medical Association of the Carolinas and Virginia to four of the chief cities in the great State to the south. The physical incidents of this trip may be fairly gathered from that account; but the spirit of the receptions accorded the party could not readily be set forth on the printed page.

Dr. H. R. Black welcomed the party to Spartanburg, and in his vigorous fashion assured the Palmetto State's full participation in the affairs of the Tri-State. After the buffet supper at the General Hospital, the county medical society carried out in fine order the program specially arranged for the occasion. Then Dr. Crowell sketched the history of the Association, enumerated the unique advantages of membership therein, and outlined a plan for forming a group within the Tri-State for the utilization of our own material and facilities for short courses of clinical instruction, rather than continuing in our present state of entire dependency on other sections. The first-class clinics given the next morning at the General and Mary Black Hospitals gave evidence of the feasibility of the plan.

A number of Spartanburgers hospitably drove to Greenville with us and contributed to the splendid midday meeting of near a hundred arranged by the president, Dr. Tyler. Dr. J. W. Jervy did the preprandial honors but was unable to lend his presence. A feature of the society's program of unusual importance was Dr. Herrin's essay and its dis-

cussion by Dr. Guess. The deaths and disabilities consequent on childbirth are a national disgrace; it is gratifying to see some recognition of this fact and some steps being taken toward bringing our results somewhere within hailing distance of those of other countries called civilized. Here, Dr. Crowell being unable to speak above a whisper, Dr. Hall expounded the purposes of the Association in general and the trip in particular.

In Columbia Dr. Wyman had seen to it that a very embarrassment of riches would be served. High spots coming to our attention were Dr. Guerry's wonderful report on his results—most likely the best on record—in nearly 3,000 consecutive operations for appendicitis, Dr. Benet's variegated clinic, and Dr. Pitts' powerful potations.

The special program of the Medical Society of South Carolina, at Roper Hospital, Charleston, was opened with a presentation of the clinical record of a patient who had been seen in the out-patient service and subsequently admitted to a hospital bed, who had died and came to necropsy; with discussion and attempted diagnosis based on the ante-mortem findings, followed by pathologic ante-mortem findings, followed by the pathologist's report.

Dr. McLeod, Dr. Baker, Dr. Kollock, Dr. Munroe and Dr. Hall spoke of the Tri-State's work and its aim.

The meeting was held in a hall one end of which is lined with rare old volumes, and decorated with paintings of Charleston's great men in medicine over many generations, and framed documents of immense historic value. Dr. Wilson, superintending the discussion in the clinico-pathological conference, was as a Sousa drawing the best out of musicians, each a master of his own instrument, and bringing harmony out of the whole.

Next morning's clinic cases, in all branches, were well worked out, and taught lessons translatable to the needs of the practitioner of general medicine.

The hospitable receptions given the party everywhere gladdened the heart and cheered the spirit. The enthusiasm and confidence shown for the cause assured for Columbia the greatest meeting of the Association's life, and a great broadening of its influence.

At every stage of the tour, the interest shown in the plans for the Tri-State by ex-

presidents was marked and gratifying. At Greenville, Dr. Davis Furman was on hand with a welcome; when passing through Laurens, Dr. Rolfe Hughes gave his blessing and expressed great concern that he could not go on with the party; at the Columbia meeting Dr. LeGrand Guerry, Dr. J. H. McIntosh, and Dr. J. P. Munroe participated; in Charleston Dr. C. W. Kollock, Dr. R. S. Cathcart, Dr. A. E. Baker and Dr. F. H. McLeod demonstrated their enthusiasm for the idea of enlarging the organization and augmenting its usefulness.

The clinics held in these four cities—well-nigh *impromptu* it might be said—afford abundant evidence of the soundness of the idea that we medical men of the South can get most of our *post-graduate* (or *graduate* as you choose to call it) work at home and from each other, at a great saving of time and means. In his first editorial expression, outlining the purpose and policy of this journal under its present management, the editor made a statement in line with this idea:

"Preference will be given to articles dealing with original work or personal clinical experiences. Research work which has direct clinical application is desired above any other class of essay. With a few notable exceptions, the medical profession of this section has almost entirely neglected this field, and has been content to quote northern, eastern, western and foreign investigators. Let us do more investigative work and progress to the point where he can quote ourselves and each other as final authorities on special subjects."

This tour was undertaken primarily to increase the membership of the Tri-State. It is to be hoped that no educated man would join any organization for the privilege of wearing one more button.

The Tri-State brings into close and reciprocal association the doctors of three States having similar populations, diseases, and modes of thought.

The Tri-State meets in one body, which assures one appearing on its program a large hearing and a broad discussion; also this circumstance practically insures a program of general interest.

The older men in the profession need an

intimate and sustained contact with the younger men; the younger men need that same contact with the older.

The Tri-State Medical Association provides this meeting ground.

GREENVILLE COUNTY MEDICAL SOCIETY'S WAY WITH FAKERS

Some time about September the first, a certain "Dr. Nanzetta" decided to extend his activities to Greenville, S. C. The County Medical Society took cognizance of this, most likely from flaming newspaper advertisements. So far it sounds like an old tale; but right here the tenor changes. Instead of doing about it what most medical societies have done under the same circumstances—to wit, nothing;—this

"society thereupon met and passed a resolution to the effect that its members would refuse to deal with any prescription department of any drug store that allowed 'Dr. Nanzetta' or any other who posed as a doctor to sell medicines in its place of business. When the society notified the druggist of its action, 'Dr. Nanzetta' moved to another store. The committee on public health and legislation of the county medical society then promptly notified the second druggist and 'the great herbologist' left town."

Our county society had a chance to check the southward advance of this very quack. *Southern Medicine and Surgery* for October, 1925, carried an editorial concluding with these words:

"Let us make it plain to the druggists who harbor these pirates, and the publishers who circulated their claims that we know no difference between the originator of a swindle which is certain to result in loss of life, and those who enthusiastically help in the perpetration of the swindle for a share in the plunder."

It would be indeed comforting to think that this journal had something to do with the action taken by the brethren in Greenville. Anyhow it is a gratification to find that we are like-minded; moreover, that the Greenville County Medical Society is one of those rarities of earth, an organization of doctors with backbone.

A great medical teacher once said, in com-

menting on the abuse to which doctors tamely submitted: "It has been said that horses, were they conscious of their strength, would not consent to be ridden and driven;" then he added: "It is true, young gentlemen, that the medical profession is not made up of *horses*; but this great truth is equally applicable to *asses*."

The Greenville County Medical Society has shown the rest of us how easy it is to effectively protect the public against such quacks, once we lay aside the *pomposity* which some love to call *professional dignity*,—and lose our fear of the daily newspapers. Real dignity is an essential to decent living; its counterfeits are hindrances and nuisances.

DOCTORS AND THE LAY PRESS

Newspapers are read by everybody. They come out daily and thus have the advantage of frequent repetition, which is the chief element in convincing the great majority. Especially since the work of doctors is becoming more and more preventive and the newspapers are carrying more and more "health columns," it is desirable that medicine have a sympathetic understanding with the daily papers in order that, in matters of health, the public may be led and not misled.

Sympathetic understanding may best be brought about by getting together and exchanging opinions. The Minnesota State Medical Association has acted on this idea and had the editor of the Saint Paul *Pioneer Press* address its last meeting. In the course of this address the newspaper-man's point of view is made plain. Complaint is made that "It [The Press] may apply to a mathematician for an opinion on the Einstein theory; it may go to an archeologist to inquire about the lost city of Ur; to a lawyer for guidance on a constitutional question; to an engineer in the matter of building a bridge, or to a theologian upon a Biblical interpretation. But when it goes to the physician to ascertain, for example, whether there is any sound scientific basis for the theory that cancer is caused by a germ, it finds itself so frequently hedged about with provisos and conditions as to make the effort well-nigh useless."

In the instance cited it would be but fair to say that a truthful answer would neces-

sarily be "hedged about," and chafing under this makes it look as though the press comes for confirmation rather than information; moreover, the officers of the State and City Boards of Health are always available for supplying such information, and no such restrictions apply to them. Further, presumably they are in the best position to give reliable information.

It can hardly be imagined that any representative of the press of New York City asked for an opinion from its excellent health board prior to the newspapers proclaiming to the country that a great German scientist, Dr. Friedmann, had discovered a cure for tuberculosis and was on his way to America to cure us of that disease; for any doctor could have said with certainty that honest discoveries were not exploited in this way. No one can compute the misery, the black despair, the lives unnecessarily sacrificed to the greed of this man, by means of the publicity given him by the daily newspapers. Friedmann is dead, which is well; but through him and the newspapers many another is dead,—"dead ere his prime," unnecessarily dead,—which is not so well.

Minnesota Medicine for October, in which the address of the editor of the *Pioneer Press* is published, makes some pertinent comments in its editorial columns to the effect that premature publicity is dangerous, and that it is only rarely that the press wants authentic information. The editor concludes with, "The appointment of publicity committees by county and state societies is probably the most satisfactory means of handling the situation." We are glad to find a second to our suggestion made in the number for June of last year, and we wish to again urge that thought be given it and action taken in the medical societies of the counties and the States.

Finally we recommend to those arranging the programme for the 1927 meeting of the Medical Society of the State of North Carolina that a representative of the press be invited to address us as a part of the public meeting.

SECRETARY LAUGHINGHOUSE

Few selections for public office in North Carolina have met with more general ap-

proval than that of Dr. Charles O'Hagan Laughinghouse for the secretaryship of the State Board of Health. Acceptance of an office which has been filled by such men as Thomas Wood, Richard H. Lewis and W. S. Rankin is, in itself, a bold act; but this is not an instance of unwarranted self-confidence.

Dr. Laughinghouse has been a member of this board for fifteen years; in this capacity and in that of the doctor caring for the largest general practice in the State, he has fully demonstrated his fitness.

Since the post was made vacant, when Dr. Rankin became director of the Hospital and Dependent Children Section of the Duke Endowment, it has been generally thought that Dr. Laughinghouse would succeed to it, if he could be prevailed upon to make the pecuniary sacrifice entailed; and the majority idea was that he would serve the State at his own cost.

Here it seems pertinent to remark that the salary attached to this, *probably the most important public office in the State* because of its vital influence on the health and happiness of its people, follows the usual rule of failure of all government agencies to reasonably compensate doctors; even I might say to penalize them for rendering service. It may well be wondered if acceptance of an inadequate salary does not, of itself, diminish the influence of an officer. Many never get away from the idea that value varies directly with price.

This journal would like to see the name of the office of Secretary of the State Board of Health of North Carolina changed to "Commissioner of Health," and the salary made somewhat proportionate to the abilities of those who have been called upon to discharge its duties.

Under Dr. Laughinghouse's direction it is confidently predicted that the health work of the State will be carried on on the high plane which has made North Carolina's State Board of Health famous wherever preventive medicine is known.

AWE OF AUTHORITIES

We Americans are fond of proclaiming our independence. It may well be questioned whether this is due more to repetition of the

language of our ancestors who had some independence to proclaim, or to our consciousness of our dependence causing us to launch an "offensive defensive."

We have not the independence of thought and action to boo a silly and uninteresting show for which we have paid good money, though this is the very proper and sensible means adopted by other peoples to discourage poor performances. Few of those listening to an address from pulpit or rostrum, or reading anything whatsoever, have the intellectual interest to question, weigh and consider. Particularly sacred is the printed word. Speakers soon learn this and cultivate their voices and gestures rather than their mental processes, and writers affect an emphatic style.

Rarely, some thinking person checks up the statements of some of our leaders and does his little bit toward encouraging all and sundry to accept only those statements which are in agreement with reason, or at least to reject those which any standard book of reference will show to be false.

Some months ago the editor heard a pulpit orator of more than ordinary fame and rank wind up a peroration on sadness with "it is sad to think of the death of a molecule;" the highest paid editorial writer in the world tells us that as soon as men began to use fire all the very hairy ones caught and were burned, utterly ignoring the fact known to every country boy that hair will singe but will not burn; and in the past few days our lovely visitor from Roumania gravely referred to Jefferson as the writer of the Constitution!

Dr. Charles Gilmore Kerley has a serial appearing in *McCall's Magazine* under the title "Damaged Lives." He says of the average two-year-old, "He has instinctive recognition of the child-lovers among the adults with whom he comes in contact, and indifference or evident dislike for those who simply pretend." How does the doctor know that those whom he and the child assume to be pretenders are so, except he adopt the capricious decision of the child as the final test? It suggests the famous "Tale without a Point," in which a perfectly well man had so vivid a dream of his death that he actually died without awakening!

Further this writer says, "unless taught by

association and otherwise, the child will continue to eat with his fingers and take his food in handfuls for the remainder of his life." Pray tell us who taught those who are to teach the child, if they did not teach themselves!

There is no such thing as *an authority* as the term is commonly understood. However much a man may know about anything, he is not infallible even at his best; and he has his off-days—

"As great oaks are from little acorns grown,
So little acorns from great oaks are blown."

OBITUARY

John Wilkes Brodnax

Born Petersburg, Va., March 21, 1864
Died Richmond, Va., October 21, 1926

Dr. Brodnax received his early education in the public schools of Manchester and McGuire's University school in Richmond. In 1886 he was graduated in pharmacy, and in 1892 in medicine, at the Medical College of Virginia. For two years prior to studying medicine he attended the Art Students League in New York and had hoped to develop the wonderful talent that he had manifested since a small boy and to make this his life work. Fate had it otherwise, however, and he was compelled to abandon the life of an artist and return to his home in Manchester where he pursued the more prosaic calling of pharmacist, and, later, of practicing physician.

From 1893 until his death he held various positions in the Department of Anatomy of the University College of Medicine and Medical College of Virginia, having been professor in the former and associate professor in the latter institution.

His knowledge of painting, drawing and modelling was of wonderful assistance to him in his work as a teacher. In his spare moments he found time to practice his old profession which had claimed his early life. Many wonderful pictures remain to proclaim his masterly touch. The bronze bust of Dr. Hunter McGuire, which stands in its niche on the stairway of the Medical College of Virginia, is probably his most notable achieve-

ment. This speaking likeness of the founder of the University College of Medicine is a work of which anyone who had made sculpture a life work might be justly proud. That it should have been done by one who followed art as a pastime and a recreation is truly remarkable.

From the year following his graduation, Dr. Brodnax held the position of coroner of Manchester and later of South Richmond.

The field of his best endeavor and in which he was at his best was as a teacher of young men. No teacher in the school was ever more beloved, and his death has cast a shadow of sadness over the student body, the faculty and the school.

W. Lowndes Peple.

William Williams Faison, M.D., Aged 72

Friday, October 22, 1926, marks a deplorable day in the history of American Medicine. At this hour died W. W. Faison, superintendent of the State Hospital for Colored Insane at Goldsboro, just as he would have wanted to die—with his hand on the tiller.

He needs no eulogy from me; upon every brick in the material fabric of this institution has one already been written; and upon the spiritual fabric, even more vividly.

Serving the State at this post for forty-three years he knew no more about political compromise than does a cardinal know of the technique of the charleston.

Realizing the human family to be "The Temple of the Living God" he trusted it implicitly; and that part of it which came under the influence of that trust—marvelling, to be sure, that it had been trusted,—reacted in positive terms, always.

Surely it can be no racial compromise to minister to afflicted negroes (a people woe-folly afflicted in its normality) since the source of all things had, in this man, provided for them the best talent.

Surely also, it would seem that we have had here a reincarnation;—ay, even more than that, 'twould seem, for we have had a man, who in his righteousness has even "scaped calumny."

If he ever did a thing with self as his ultimate consideration nobody has ever been able to find out what it was.

He lived tranquilly, and thus he died;—

fearlessly, trustfully, truthfully and, withal, manfully,—reflecting alway that “Peace of God which passeth all understanding,” and which still pervades and governs the place he occupied.

Blythe Morris.

Dr. William Wallace Fennell

On Monday, October 11, York County lost its most beloved citizen—the man who helped more people than any man in his country—Dr. William Wallace Fennell. No one who attended the funeral on the following Wednesday could doubt the accuracy of this statement. In looking over the many present, I could recall some act of kindness he had done the majority of them in the short seven years of my association with him.

There is nothing more fitting to say of him than he was a representative of that class of men with God-given talent, whose duty it was to start and greatly perfect that part of the unfinished work of Christ on earth of making the blind see, the dumb talk and the lame walk,—the pioneer surgeon. As a representative of this class he did his part well without care of his own health or thought of reward.

We of the younger generation should cherish the memory of our association with such men. We should be proud that we were privileged to see, to study, to know them. May the coming generations of surgeons of South Carolina never be allowed to forget the names of Pryor, Fennell, McLeod, Guerry, Baker, Cathcart and Black; nor those of North Carolina forget Gibbon, Pressley, Strong, Crowell, Long, Royster, Norris, Highsmith and others whose names I cannot recall. May we remember them as a class whose keenness of observation, steadiness of hand and bigness of heart made our profession what it is today

in the communities where we carry on. I know Dr. Fennell was very proud to be in this class.

Let us have some fitting way of preserving their memory so that future surgeons will know who started the great work in our two states.

W. B. Ward.

Dr. Henry H. Dodson

In Greensboro on October the 22nd, died a doctor of the old school who had kept step with the new, and who was as honored for his devotion to the cause of his Master as for his labors in the cause of health. In his professional capacity he had been country doctor, member of the Boards of Health and of Medical Examiners, and an active participant in the affairs of the Medical Society of his State, a charter member of the Tri-State Medical Association of the Carolinas and Virginia, and a renowned specialist in the application of the x- (unknown) rays to the diagnosis and treatment of the afflictions of his kind: as a reverent being he had served his church as one of its most unselfish and dependable workers all the way up to the office of Senior Warden.

As a very special mark of recognition of unusual service the funeral rites replaced the regular order at Holy Trinity, Greensboro, on the Sunday morning following his death, the members of the vestry bearing the pall and the whole membership of his county medical society serving in an honorary capacity.

In his funeral, as in his life, there mingled the high and the low, the learned and the simple, those of every faith, creed and color,—all come to pay a last tribute to one who had ministered to each according to his need.

J. M. N.



DEPARTMENTS

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

PRO QUO?

Only a day or so ago a dilapidated-looking young man, bowed by the weight of suffering and by a sense of distress vocalized by his whole being, stepped into my office, fell into a chair, and moaned: "Doctor, you know what's the matter with me. I have seen four doctors, and they all told me that you could relieve me. I am worse than dead." Of course I knew what was the matter with him. He was in the grip of The Great Hunger. He was without his food. The blue sky, the goldening foliage, the tinge of autumn in the air, the great harvest season, brought no joy to his soul. The hurricane in the southern peninsula had driven him northward on the way to his old home. The precious package was not awaiting him at the general delivery window, as he had expected. His woe was unspeakable. He was without his accustomed dosage. He had no morphia. What price existence? That was his cry. A grain? surely a half? for God's sake a quarter? That was his prayer. But my heart became stony: my face hardened. I could and I would give him no morphia at all. Of course he was an opium addict. His whole being cried out the dreadful fact. Why should he attempt to conceal it? But I remembered. What a dreadful thing memory sometimes is! Only a few weeks ago I was called to the bar of justice in my own city to speak in defense of my professional brother who in a moment of sympathy had given relief to a suffering mortal by slipping under his skin just a wee mite of the precious white powder. But in so doing he had violated a law of his city. And one of the detectives of the city, jealous of the good name of the municipality, had traced the commission of the awful crime back to the doctor, and there before his honor I found the medical man,

speaking in defense of his character and of his method of practice. And near him stood human agencies of the Federal Government, United States narcotic agents, testifying that they had advised the medical man that he might give relief to the suffering addicts. But the visualization of myself before a bar of justice in my city charged with the crime of relieving human suffering was too much for me, and I hardened my heart, even as the Lord is reputed to have hardened the heart of Pharaoh, King of Egypt. And the pleadings of the young man journeying from the far South to the place of his nativity in the distant North fell upon deaf ears. And from me he got no morphia, but from him a got an interrogatory curse and a question I am yet unable to answer: "What the hell is a doctor for if he won't relieve suffering?" And as he shambled and stumbled along his way to the nearby trolley line, his curse came back to my ears, and it still wrings my heart and wrenches my soul. Again and again I could only ask myself of what use is the doctor's license to practice medicine if he cannot practice his profession as he would? And what of the Book of Job? Even if it be a majestic effort to explain the mystery of the necessity of human suffering, what comfort could it bring to the dilapidated young man with the Great Hunger? Again and again I have spoken thus to myself: "Why should a municipality or The Congress undertake to practice medicine?" And ringing yet in my heart I feel the interrogatory malediction of the departing young man, as he shambled out of my sight: "What the hell is a doctor for if he won't relieve pain?"

WHAT IS PELLAGRA?

The American Journal of the Medical Sciences for September, 1926, carries a contribution on Pellagra by Dr. Irwin C. Sutton, of Hollywood, California. In the article he reviews 56 cases that came under his personal care, and the condition of three or four of

the patients was outlined in some detail. Of the 56 patients 30 were females and 26 were males. The age-range was from six and a half years to sixty-seven years. Eleven of the patients died, three of these of cancer. "The tendency of the unknown toxin of pellagra to express itself in the three great systems of ectodermal origin, the skin, alimentary tract, and the central nervous system, is obvious, and is manifested by the familiar diagnostic triad of dermatitis, diarrhea, and dementia."

Sutton is of the opinion that the cause of pellagra is still unknown. Goldberger is the leading exponent of the theory that the condition is an expression of a dietary deficiency—too little protein in the food. But pellagra patients are encountered in which there is little evidence of protein starvation. Another theory offered in explanation of the condition is that it results from pathogenic intestinal flora. Jobling and Arnold are quoted: "Pellagra is not a deficiency disease, comparable to beriberi and scurvy, but one in which a definite intoxication arising most probably from the intestinal tract, forms the basis of the pathologic condition. This theory would explain the epidemiology of pellagra in patients with a high protein-diet, and would suggest that the peculiar skin changes may be caused by the action of the sunlight on a subject rendered photo-sensitive by a substance elaborated by intestinal flora."

The conclusions reached by Sutton are interesting. They are: Pellagra is not a simple deficiency disease like beriberi or scurvy. The causative agent is probably of an infectious nature, and gives rise to a substance which sensitizes the individual to sunlight. Ambulatory patients do better outside a hospital. The necropsy findings are trivial for a condition so grave. A diagnosis of the skin condition is essential for a correct diagnosis of pellagra. It is well to bear constantly in mind that pellagra is not a tropical disease, but may appear anywhere, at any age, and in either sex.

A few days ago in the State Hospital at Morganton, North Carolina, I read the notes made by myself on a young man who died in that institution soon after admission in the mid-summer of 1906. He had all the evidences of pellagra in violent form. I did not know at that time what his condition was, but I made the diagnosis a year later

when the first case of pellagra was reported in the United States. But when the patient was being examined I realized that I had no familiarity, and the notes recorded all the chief manifestations of pellagra in the late stages.

Pellagra is now more seldom seen. It occurs less frequently and in less virulent form. Most of the cases that I see recover. I have been impressed in recent years by the association of pellagra with alcoholism. For a good many years I have seldom seen pellagra in a man who was not a whisky drinker. Pain in the feet and legs is a frequent complaint in pellagra. In an individual who is alcoholic it is easy to make the assumption that the pain in the lower extremities is due to alcoholic neuritis.

THE GREAT DESTROYER

There is little use of crying out against destruction. It would seem to be necessary in a world in which there is to be any progress. Not long ago in the edge of Washington City which is in the process of becoming residential I saw a hill being gradually abolished. I suppose the hill had been there since the world had assumed finished form. But by this time it is gone. There is no hill there, but only a level, grass-covered development, marked off for residential lots. Dynamite, cranes, tractors, scrapers, picks, shovels, and the muscles of men and of beasts have leveled the hill down. As a hill it was destroyed. And I am certain that those in charge of the development must have looked upon their destructive work as beneficent, and as a step in the direction of progress.

Harper's for September of the present year carries a contribution from the pen of Gamaliel Bradford on "Darwin the Destroyer." I have read the article on three different occasions. My mind is too small to enable me to comprehend the meaning of the implication of the theory of evolution, but Bradford's essay enables me to understand the destructive commotion set up in the intellectual world by Darwin's pronouncements. Darwin was a destroyer. There have been many of them. Abraham Lincoln destroyed a civilization in the South as completely as if he had thrown it in the fire and burned it up. Copernicus long ago was a destroyer. He

demolished completely many beliefs that had existed for centuries before he was born. One of the notions that he permanently put out of existence was the idea that this sphere we have habitation on is the centre of the universe. Copernicus demonstrated that it is only an infinitesimal and an inconsequential speck in an incomprehensible and limitless universe. And finally the theory of Copernicus prevailed. Even the ecclesiastics had to accept it. But the waters remained quiet only for a little while. Then Darwin appeared with his awful statements. He was unmoved by the prevailing opinions of his day—in theology, in sociology, in science, and in other domains of thought. He went in search of facts. When there was a sufficient assemblage of facts he reached certain conclusions, and enunciated a theory in explanation of the facts he had discovered. He spent his life under the reign of so-called kings and queens, but he must have laughed at least up his sleeve at the notion of the divine right of rulers. He was the great leveler, and no great leveler can have much regard for a mere individual. Darwin had little apparent concern about the ultimate origin of life—individual or racial. Such a conception was too much for him. He could not grasp it. "It is mere rubbish, thinking at present of the origin of life; one might as well think of the origin of matter." And as to the final fate of the individual he was equally as ignorant. "The conclusion that I always come to after thinking of such questions is that they are beyond the human intellect; and the less one thinks of them the better."

As an illustration of the effect of the Darwinian influence on theological thought Bradford states that "science, for example, has disposed of hell with ludicrous completeness," and "unfortunately, hell, in departing, has shown a marked tendency to drag heaven with it." Darwin did not destroy God. He assaulted in destructive and deadly fashion long-existing ideas of God.

Bradford's conception of Darwin as a great destroyer is well-worthy of careful reading. It provokes serious thought. And his book on Darwin, which is just off the press, but which I have not seen, ought to be informative.

SURGERY

GEORGE H. BUNCH, M.D., *Editor*
Columbia

TETANUS

The tetanus bacillus is perhaps the most widely distributed of the pathogenic organisms. We think of it being a normal inhabitant of the intestine of the horse but it occurs in other animals. Sanfelice found tetanus spores in 7 out of 23 normal guinea pigs. Pizzini found that 20 per cent of men working about horses had the bacilli in their stools. Matas in 1909 reported a case of tetanus after hemorrhoidectomy and *advised the prophylactic administration of antitetanic serum whenever an operation about the anus was to be performed.* The bacillus occurs in all climates but is more common in warm countries. It is an anerobe and gunshot or lacerated wounds are especially fertile fields for its development. An incubation period of about 10 days is usual but symptoms may come within 4 or 5 days or as late as a month. Symptoms begin with a stiffness of the muscles of mastication, which soon becomes a trismus giving the name, lock-jaw, to the disease. Soon most of the voluntary muscles become involved and a state of tonic and clonic contraction develops with fever and pain. There is a mortality in acute tetanus of about 75 per cent, the patients dying of starvation because of the inability to relax the muscles for eating, or suffocation from the paralysis of the muscles of respiration or of toxemia.

The treatment should be the injection of the prophylactic dose of serum (1500 units), at the time of injury. Every break in the skin or mucous membrane is a possible entrance for the bacilli, crushing injuries, compound fractures, gunshot wounds, wounds about the head or face and punctured wounds from rusty nails being especially liable to the development of tetanus. Every such wound should be thoroughly opened, swabbed out with iodine, and packed with gauze, under a general anesthetic if necessary. The efficacy of this prophylactic treatment of tetanus was shown by the falling of the tetanus cases practically to zero in our wounded in France when the serum injections were begun. It is also shown by the

negligible incidence now of tetanus after 4th of July injuries. There were 415 cases of tetanus from 4th of July injuries in the United States in 1903—more than half the cases reported for the entire year and more than occurred in the Federal wounded during the four years of the Civil War (337).

After the disease has developed the patient should be kept quiet in a dark room. Sleep should be insured by giving choral. Sufficient nourishment and fluid should be given, through a nasal tube if necessary. Wainwright, of Scranton, Pa., in the *Archives of Surgery*, May, 1926, advises giving antitetanus serum 30,000 to 50,000 units intravenously but urges against giving it intraspinally, saying that the intraspinal use of the serum actually does harm. His study convinces him that in the North the routine giving of the serum as a prophylactic is unnecessary. We are sure that in the Carolinas and in Virginia the routine use of the serum after all industrial and accidental wounds is best.

Several years ago a man dived feet foremost in water 8 feet deep and lacerated the bottom of his foot on a snag 6 inches long in the bottom of the pond. He had been in the water, without coming to the shore, for more than two hours. The edges were opened and iodine was poured into the wound. Gauze was packed into it and the foot bandaged. Thinking the wound could not have been infected with tetanus, we did not give antitetanic serum. On the 5th day the man had a convulsion and on the 7th day he died of tetanus in spite of our every effort. Our only consolation is that the infection might have come from the extraction of a molar tooth two weeks earlier. This is the only case we have had develop in a wound under our care. *It pays to give antitetanic serum and be sure that tetanus will not develop.*

EAR, EYE, NOSE AND THROAT

THE MATHESON GROUP, Editors

For this issue F. E. MOTLEY, A.B. M.D.
Charlotte

THE IMPORTANCE AND MEANS OF DIAGNOSIS OF SINUS DISEASE IN CHILDREN

It is the purpose of this article to show the importance of a diagnosis of sinus disease in

children, and the means of arriving at a diagnosis, not to discuss other phases of this subject.

During the past few years more stress has been placed on the systemic effects of accessory sinus disease. Drs. Odeneal and Dean and others have called attention to the role played by sinus disease in children in causation of remote systemic conditions such as: arthritis, malnutrition, anemia and diarrhea.

Dr. P. C. Jeans states that any condition in infants and young children that may result from a focus of infection may result from sinus disease.

An unrecognized and therefore neglected sinusitis in childhood is responsible for a number of cases of bronchiectasis and asthma seen in adults. The presence of sinus infection increases hypersensitiveness to any allergic factor.

In cases of questionable sinus involvement in children, a positive history of the childhood diseases is important evidence in favor of sinusitis. Scarlet fever and chronic colds are the serious offenders. With sneezing, mucopurulent discharge and a history of frequent colds, persisting even after removal of tonsils and adenoids, all sinuses should be carefully examined. Cases in which there are sneezing attacks brought on by slight changes in temperature, or in humidity, promptly followed by a cold, should be regarded with suspicion.

As to the means at our disposal for diagnosis: Careful and competent x-ray examination is a valuable aid. Anterior rhinoscopy, with naso-pharyngoscopic examination, when possible, are also valuable adjuncts. Transillumination is not always reliable and may be misleading. Diagnostic puncture of the antra with culture, aspiration, or irrigation, can be resorted to, if indicated.

Frequently all chronic colds and cases with nasal discharge (regardless of location, character or amount) are attributed to diseased tonsils and adenoids. This cannot be taken for granted, and while that factor has to be considered, it must be kept in mind that the true source of infection may be in the paranasal sinuses and careful attention should be given to their examination.

THERAPEUTICS

FREDERICK R. TAYLOR, B.S., M.D., *Editor*
High Point

THE TEST OF TIME

When a new preparation of value is announced, time is required to learn its excellences and defects. Last month we discussed two interesting preparations, ephedrin and butesin picrate ointment. Since that time we have learned further interesting things about both of them. A professional friend, desiring to try ephedrin in an asthmatic patient, had a pharmacist order a supply. Somewhat to his dismay, our friend later learned that the drug was so expensive that the pharmacist felt obliged to charge the patient 12½ cents per 1 grain capsule. This makes the drug impracticable for prolonged administration to many patients.

We are trying butesin picrate ointment on certain conditions other than burns, and are watching the effects with interest. One chronic leg ulcer has healed under it which failed to heal with every other method we could employ except rest in bed, which the patient refused. Another healed promptly that had received no other treatment. A third has shown no tendency to heal, but all the patients have expressed gratitude for the marked relief from pain suffered by the preparation. One patient with a bedsore is being treated with it, but as she is virtually moribund, we expect little or no improvement in the sore.

THE RELIEF OF PAINFUL SPASMS OF THE CALF MUSCLES

Painful spasms of the calf muscles occur in many conditions, ranging from simple unaccustomed exertion of the muscles to advanced arteriosclerosis. Sometimes the pain due to these spasms is very severe. They usually occur at night when the patient is in bed. Many victims have discovered for themselves that they can obtain relief by getting out of bed and standing on the floor. Often quicker relief, practically instantaneous, indeed, may be obtained in a simpler way that will avoid the chilling often attendant upon getting out of bed, and that is, to grasp the foot with the hand and produce

sudden forcible dorsal flexion of the foot, precisely as one would do in testing for ankle clonus. This causes a sudden stretching of the calf muscles, and in many instances completely stops the spasm at once.

PHYSICAL THERAPY

In the October 16th Journal of the A. M. A. is published a report of a Committee on Present Status of Physical Therapy. This report has been approved by the Council on Physical Therapy. An abstract of this report follows:

After defining Physical Therapy, certain phases of its application are discussed. The report points out that at times it is used on the theory that it will do no harm and may do good, and that oftentimes benefit results, but sometimes harm, and that the patient may get into the habit of taking treatments until they are unduly prolonged. Of course adequate diagnostic work should precede this form of therapy as well as any other, and it is equally obvious that physical therapy should not be relied on to the exclusion of other forms of treatment where they are indicated. Many unfounded claims are made by various manufacturers' agents.

Physical therapy came into its legitimate place during the World War. The measures that are known to have value are given by the report as being:

1. Heat, Natural and Artificial. Diathermy, hot dry packs, hot water bottle, electric pads, and the combination of heat with light and heat with hydrotherapy.
2. Hydrotherapy. Hot and cold packs, hot and cold douches, whirlpool baths, swimming pool.
3. Light. Heliotherapy or sunlight; artificial light, as that from a mercury arc quartz lamp, air or water cooled, a carbon or modified carbon arc lamp, and an incandescent lamp; gamma rays of radium, roentgen rays.
4. Electricity. Galvanic, faradic, and sinusoidal currents, static electricity, ionization, and combinations of these.
5. Massage. Manual percussion, stroking, sedative type, brisk kneading type, manipulative, as in stretching, pulling, and corrective manipulations.
6. Therapeutic exercises. Muscle training exercises, passive and active, mechanotherapy, occupational therapy, games.

The report then continues by stating that physical therapy is in a transitional stage, but that its use is extending despite its wholesale condemnation by some physicians. More and more it is being recognized as a valuable adjunct to our other methods of treatment. However, many charlatans are grossly exploiting physical therapy. The council therefore brings to the careful attention of the medical profession the following four considerations:

1. Physics, physiology, and biochemistry must be called on to dispel the empiricism of the past and to prove the true scientific value of various physical agencies.
2. Physical therapy must be recognized as a defini-

nite part of medicine, practiced and controlled by graduate physicians. With medicine and surgery it forms a therapeutic triad, and is not a distinct school of practice. However, it should be used only after proper training.

3. Every medical school should give a thorough course in physical therapy. Commercial courses of one or two weeks cannot make competent physical therapists.

4. Persistent, prolonged effort must be made to eradicate the abuses of physical therapy. Over-enthusiasm should be avoided, and technicians should not operate independently of medical supervision.

INTERNAL MEDICINE

PAUL H. RINGER, A.B., M.D., *Editor*
Asheville

ARTHRITIS

Cecil and Archer in the *Journal A. M. A.*, September 4, 1926, give an excellent clinical classification of arthritis. They follow the main classification of Nichols and Richardson put forth in 1909, namely, the dividing of cases of arthritis into

1. Proliferative
2. Degenerative.

In proliferative arthritis, proliferation of the synovial membrane produces a layer of granulation tissue which sooner or later may extend over the joint cartilage. Proliferation of the perichondrium may lead to the formation of new cartilage or bone. These inflammatory changes lead to partial or complete destruction of the joint cavity with subsequent fibrous or bony ankylosis.

In degenerative arthritis there is degeneration of the cartilages of the articular surfaces. The underlying bone becomes exposed so that eventually two bony surfaces are in contact. The exposed bone becomes extremely dense and has a high degree of polish. There is also increased perichondrial activity as a result of which there is a new formation of cartilage which may be transformed into bone.

Out of 612 cases studied by Cecil and Archer 414 were classed as proliferative and 182 as degenerative. Only 16 out of the 612 failed to come under one of these headings.

They say: "Proliferative arthritis includes all of the frankly inflammatory arthropathies. It can be sub-divided clinically into:

1. Chronic infectious arthritis, referable to foci of infection

2. Specific arthritis caused by specific bacterial infection (gonococcal, syphilitic, tuberculous, etc.)

3. True arthritis deformans, a chronic progressive polyarthritis of unknown origin.

The cases of degenerative arthritis have also been divided into sub-groups:

1. Arthritis of the menopause
2. Degenerative monarticular arthritis
3. Senile arthritis.

Out of the 414 cases of proliferative arthritis, 379 were of the chronic infectious type. Any joint in the body may be involved; but the fingers, knees and shoulders are those most frequently affected. There is pain, some heat, slight redness and swelling. Ankylosis is common but does not occur until the second or third year of the infection. The main treatment is discovery of the focus of infection and its removal. Tonsils and teeth are of course the main offenders. Radiant heat, diathermy, massage and passive movements have also been used with success. It is important to treat these cases as early as possible for: "in a series of 92 patients who were being treated at the Cornell Clinic over a period of time lasting from three months to three years, the results as follows: 82 per cent of the patients treated during the first six months of their disease either recovered completely or were greatly improved. The percentage of favorable results decreased with each year, so that patients whose symptoms had persisted for five years or more before coming to the clinic rarely received very marked benefit from any form of treatment."

It was found that in the treatment of cases of gonorrheal arthritis with gonococcus vaccine better results were obtained by the use of the vaccine intravenously, beginning with a dose of 25 million gonococci and gradually increasing up to several hundred million.

Results in arthritis deformans (18 cases) were disappointing. The process was steadily progressive and ankylosis occurred early.

Degenerative arthritis from the very nature of the process is, as a rule, less painful than the proliferative variety. Out of 182 cases, 145 classified as "arthritis of the menopause." It is usually seen in obese middle-aged women (average age of this series 52½ years). Foci of infection are rarely demonstrable,

The onset is insidious, knees being involved, first becoming stiff on walking. Both knees are usually affected. The lumbar vertebrae and the bones of the feet are often involved. Progress is slow, but every year the disability becomes more marked. The main treatment consists in reduction of weight by a low calory diet consisting mainly of green vegetables. Iodides and thyroid are also of value.

It would seem that the proliferative type of arthritis is certainly infectious, and the degenerative type non-infectious. "Differential diagnosis is usually easy. The proliferative type is migratory or progressive. There is usually pain, swelling and limitation of motion in some of the joints. Roentgenograms in the early stages show little, if any, change."

"Degenerative arthritis occurs in middle-aged and elderly people. It is apt to be monoarticular or at least limited to three or four joints. The progress is very slow. Roentgen-ray plates show new bone formation at the line of insertion of the capsule. The interarticular space may show irregularities but is practically never obliterated, as ankylosis does not occur."

If this main classification is adopted, its importance in diagnosis and treatment is obvious. In the proliferative type, search must relentlessly be made for foci of infection in every portion of the body and, when found, their complete removal is imperative. On the other hand, tonsillectomies, tooth extraction, etc., will necessarily be of little avail in the degenerative variety, as this type of arthritis is non-infectious and its cause must be found more probably in some metabolic disturbance due to obesity, faulty diet, an endocrine dysfunction or what not.

It seems to the writer that this paper by Cecil and Archer is a very valuable contribution to the hazy and but ill-understood subject of arthritis, giving as it does a working hypothesis for a simple and intelligent clinical classification in diagnosis, upon which in turn, is based a rational and sound system of therapeutic management.

RADIOLOGY

JOHN D. MACRAE, M.D., *Editor*
Asheville

TUBERCULOUS ENTERITIS

It is variously stated that tuberculous enteritis complicates pulmonary tuberculosis in from fifty to ninety per cent of cases. I, personally, observed most of a series of two hundred autopsies on subjects dying of advanced pulmonary tuberculosis, in which more than ninety per cent had intestinal lesions.

A good many cases referred to radiologists for gastro-intestinal study are exhibiting symptoms of toxemia from pulmonary tuberculosis which first manifested itself by digestive disturbances and the study fails to reveal the cause.

This is probably the most serious of the complications of late tuberculosis; so much so that until good results were demonstrated with heliotherapy, a case with this complication was practically hopeless; and I am sure that this hopeless attitude prevented attempts to make early diagnosis.

With these observations in mind I am impressed with the idea that far more intestinal disease exists than is recognized in the early stages of pulmonary tuberculosis.

Primary tuberculous enteritis occurs so rarely that I will not attempt to discuss it in these notes.

In order to recognize this condition a general idea of the changes produced by it must be considered and then the constant x-ray findings in positive cases must be determined. When these characteristic x-ray signs are recognized in a patient suffering with pulmonary tuberculosis and who loses weight in spite of good treatment, besides having more or less of abdominal pain, or malaise with constipation and occasional attacks of diarrhea, the diagnosis of tuberculous enteritis is established.

The great majority of cases are marked by lesions in the region of the ileo-cecal junction. The lesions first appear as tubercles, single and in groups, in and under the mucus membrane or in a Peyer's patch. The tubercles conglomerate, caseate and ulcerate. There

may or may not be considerable hyperplasia with infiltration. Some lesions may become fibrous without ulceration when recognized ulcerations predominate.

Inasmuch as the cecum and ascending colon act as a reservoir and fecal matter accumulates and rests here more and longer than in other parts of the intestinal tract, and the feces of a person with pulmonary tuberculosis is heavily laden with the infected sputum which he swallows, this and the terminal ileum is the region in which the bacilli infect the intestines. Much less often is the infection of the wall of the gut accomplished by extension from lymph nodes in the mesentery or from some other abdominal viscus.

The clinical manifestations in a patient which suggest the need for x-ray study are indefinite. There is no pathognomonic symptom. Constipation, with occasional spells of diarrhea; abdominal discomfort rather vague in character, and sometimes pain localized in the right lower abdomen; toxemia, anorexia and continued loss of weight. These are the signs, but this group of symptoms with variations are so often met with that a study of the intestinal tract should be made in practically all moderately advanced cases of lung tuberculosis, especially since the use of heliotherapy, natural or artificial, has been proved to be so beneficial: consequently I advocate routine x-ray study of the intestinal tract in pulmonary tuberculosis in order that early cases may be recognized and treatment instituted.

X-ray study is done by giving a barium suspension in malted milk or buttermilk by the mouth or opaque material is given as an enema. Fluoroscopic and film examination should be combined. If the oral method is attempted and for any reason is unsatisfactory have the patient's bowels cleared out and use the opaque enema.

The routine method of examining the gastrointestinal tract varies a little in different laboratories. In my own work I have the patient report for the series at nine a. m. without food since the previous evening. No preliminary purgative is given.

Fluoroscopic examination is made while the patient stands and drinks a pint of barium suspension in malted milk or buttermilk. Films are made after the patient has been put on the table and fluoroscoped in the hori-

zontal position. At this time the number of films are few or many, according to what is seen fluoroscopically.

At the 6th hour and 24th hour a single film and fluoroscopic study is made and others at other periods during the digestive cycle, occasionally at the 48th and 72nd hours. Different conditions call for modifications of this routine.

When tuberculous enteritis is suspected, the hours when we can examine the ileum and cecum most satisfactorily are from the 6th to the 18th.

Inasmuch as most of the lesions are in the last part of the ileum it is not to be expected that such lesions will be demonstrated with the opaque enema, consequently the ingested barium suspension is used regularly and the enema is a supplementary procedure.

The enema is prepared with about six ounces of barium in suspension with mucilage acacia or malted milk and is injected under fluoroscopic observation and when the cecum is filled films are made. The patient is required to evacuate and another film is made.

The lesions being of varying character our findings correspondingly differ. It is hard to differentiate the filling defects resulting from nodules, ulcers, infiltrations and the spasms of muscle contraction caused by irritable lesions one from the other. If filling defects are plainly demonstrated in the terminal ileum or colon and the patient has the symptoms referred to above and also has pulmonary tuberculosis the filling defects are almost certain to be the evidences of tuberculous enteritis.

PEDIATRICS

FRANK HOWARD RICHARDSON, M.D., *Editor*
Brooklyn, N. Y. and Black Mountain, N. C.

"FATIGUE POSTURE" AND ITS CORRECTION

Countless exercises have been devised for the correction of the many component faults of posture that go to make up what has been spoken of as the "fatigue posture," that is so characteristic of the child suffering from malnutrition. The trouble with all of them is, that unless the parent or the nurse or the teacher of corrective exercises who applies them succeeds in enlisting the genuine inter-

est of the child, and thus makes them an enjoyable feature of the day, she will simply have increased the burden of fatigue that originally caused the faulty posture,—and so the last case of the child is worse than the first; the “cure” has increased the disease! So that the great difficulty here, as in all other corrective exercises for either child or adult, has been not in finding some set of gymnastics that would exercise the weak muscles and correct the incorrect attitudes, but in hitting something that would give pleasure instead of exhaustion, and so would be genuinely corrective.

It has been found possible to appeal to children over quite a wide age range, by the line of attack furnished by their interest in their personal appearance. While the lower age limit at which this appeal may be made of course varies, there is practically no upper limit beyond which an individual can go, at which he loses all interest and pride in his personal appearance. This all but universal characteristic has been made good use of, in an exercise for improving the fatigue posture as a whole, by employing it in connection with what has been technically named by singing teachers, “the fixed high chest.” Suppose we examine this, and see whether we can make use of it for the purpose of improving the characteristic faulty posture of the child suffering from malnutrition.

If any one whose posture is lacking in the elements that make for a correct stance, will place himself in front of a full-length mirror in such a way that he can observe his own profile, and will then take as deep a breath as he can, he will be surprised at the improvement that will at once be noticeable in his attitude. His chest will appear much larger than before; his back will appear flat instead of curving; the shoulder blades which were previously noticeable as prominent triangles will have merged into this flatness of the back; the abdomen, previously somewhat protuberant, sagging, and ungracefully prominent, will have disappeared from the picture, and have been succeeded by a most satisfactory flatness; and the whole figure will have an erectness and trimness quite in contrast with the laxness and “slump” which characterizes the posture of most of us when we are standing at ease, and off our guard. The disappointing thing about this is, however,

that as soon as the air is allowed to escape from the chest, the original relaxation with its customary poor posture returns. What the singer is taught to do, however, is to retain by force of muscle alone this position of the chest that he originally assumed solely by virtue of inflating his chest with air. In other words, by practicing the *manœuvre* frequently, he learns to retain the greatly increased chest volume thus attained, while allowing the inspired air to escape. It is an interesting fact that so long as the “fixed high chest” is thus maintained, all the rest of the desirable postural accompaniments remain in evidence, although no thought is given to anything but the maintenance of the enlarged thoracic air space.

The anatomical explanation of what the singer is thus doing lies, of course, in the role played by the diaphragm in the complex act of breathing. There are two ways in which the chest can be enlarged for the inrush of air that we call “inspiration,”—for we realize of course that what we loosely and inaccurately speak of as “drawing in the breath” is in reality nothing of the sort, but is simply an increase in cubic capacity of the chest, into which more air of course at once rushes. One way is by lifting up and forward the anterior ends of the ribs, and causing the lower ribs to flare out,—what is commonly called costal or chest breathing. The other way is by depressing the diaphragm, that horizontal conical wall of muscle that divides the trunk into two cavities, the chest and the abdomen. Depressing the diaphragm increases the capacity of the chest, and similarly allows air to rush in to take up the added space. The fact that it increases this capacity at the expense of the abdomen is evidenced by the increased prominence of this container, whose contents cannot be pushed anywhere but forward. While forced breathing is usually largely accomplished by increasing the amount of costal movement, it is possible to breathe forcibly by increasing the abdominal or diaphragmatic element. In ordinary breathing (especially of men) we do much of the work with the diaphragm, allowing the chest to stay unexpanded. What the singer does is to hold the costal expansion at its greatest, meanwhile doing most of his breathing by means of the latinate contraction and relaxation of his diaphragm.

What is necessary in order to enlist the interest of the child with poor posture, is to let him see the improvement in his own posture that takes place while he assumes this attitude that comes of itself as a result of taking a full inspiration; and then to let him observe how this improvement is maintained as long as he can keep his chest high. It is not hard to enlist his interest, when once he sees the difference in his appearance brought about by this very simple manœuvre. Going through the exercise for five minutes before the glass two or three times a day, is not hard to bring about. When once this habit has been established, it will be found easy to go one step further, and induce him to watch himself as he walks along the street, using the shop windows as a succession of mirrors, noting all the while how much more like a man and a soldier he looks, or how much more closely she resembles a society woman or a movie queen. We elders need not be a bit stinting in our recognition of the effort, and in our praise of the improved appearance. This sort of praise never hurt any child; and the youngster who has tried hard enough to make some impression upon the bad old habit of slouching, is well deserving of all the commendation that he is likely to get from us niggardly adults, who are frequently so afraid of praise for our children that we withhold from them the only reward that they really prize, which frequently is our approval and nothing else.

It may not be altogether out of place to mention here, as a fore warning that may bring about forearming, that the main difficulty involved in "putting across" this manœuvre lies in the difficulty of keeping the chest "fixed high" when it is first essayed to exhale in this new posture. The natural and easy thing to do is of course to allow the raised ribs to subside and the enlarged chest to sink back into the position of smaller size that has been habitual with the child, instead of keeping it in the enlarged, raised position. It will be very helpful for the adult to practice this procedure herself, before she attempts to teach it to the child. It will be most helpful if she will place her left hand upon her chest, and her right upon her abdomen, and watch which type of breathing predominates by noting which hand moves more. If the breathing is of the old, costal or chest

type chiefly, the left hand on the chest will move up and down, or out and in, while the right or abdominal hand will be practically motionless. The reverse will of course be the case, if she is employing the desired abdominal type of breathing. When this difference has once been mastered, it will be comparatively simple to communicate the idea to the child.

Among causes for the fatigue posture, other than overstrain and fatigue itself, may be mentioned: improper seating in the home,—especially at table, while doing homework, and at piano practice; improper clothing, which pulls on the shoulders, contracts the chest, and flattens the bust (e. g., "boyish-form" brassiere); tight or ill-fitting shoes; and pernicious fads, such, for example, as the "debutante slouch."

Quite as important as the correction of any of these causative factors,—indeed, a most important aid in the elimination of almost every one of them,—is what one of the sanest of the technical writers on posture has called, in her new book, the "mental set of the child,—a desire to improve and determination to persevere." Indeed, this writer (Miss Lillian Curtis Drew "Corrective Exercises") has given an uncommonly comprehensive and comprehending survey of the causes that bring about faulty posture; and has shown clearly and convincingly how utterly impossible it is to hope for results by the mere routine procedure of "going through exercises," unenlivened by some spiritual impetus toward improvement. Her chapter on "Methods of stimulating interest in posture" is priceless, for those engaged in work of this sort with young people.

UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*
Charlotte

IMPORTANCE OF THE EARLY RECOGNITION AND TREATMENT OF URINARY EXTRAVASATION

The extravasation of urine into the tissues surrounding the external genitals of the male is not uncommon, yet it is frequently unrecognized until the patient is in extremis and surgical interference avails little. Dr. Claude

Squires and I were so forcibly impressed with the fact that urinary extravasation was common, that it was not generally diagnosed early and that it was extremely fatal that we endeavored to present a paper before the Surgical Section of the State Society in 1925. It is appalling and distressing to me to see how little space is devoted to this very destructive and serious complication of urinary accidents and disorders. The lack of diagnostic information is probably due to faulty teaching in the genito-urinary departments of our medical schools and to the lack of emphasis being placed on this condition in our standard works on urology.

In *Surgery, Gynecology and Obstetrics*, V. 26, 296, 1918, Dr. J. A. Wolfer placed his cases of "Extravasation of Urine" into two major groups: (1) extravasation of normal urine from the bladder or urethra when there has previously been no stenosis of the urinary outlet; (2) extravasation of septic urine which is practically always associated with urethral stenosis. The above classification is both clear-cut and to the point. In each classification it suggests to the reader the causative factor and in this way reminds us that with certain types of injury to and pathology of the urinary tract we must suspect extravasation of urine as one probable result. In the first class of cases we have trauma as the important factor. Crushing injuries causing a rupture of the urethra or bladder; stab wounds or gun-shot wounds of the urethra or bladder also fall under the first group. In the first class we are usually dealing with uninfected or clean urine, which is an important point to consider.

Dr. Wolfer in his series of 31 cases from Cook County Hospital reports five cases of extravasation of clean urine with a mortality of 60 per cent. He wisely points out that the danger of extravasation of uninfected urine lies in the fact, that it produces very few early signs and that a marked inflammatory reaction may be delayed for two to four weeks. These patients usually die from an overwhelming urinary sepsis.

In the second class of cases we have a definite pathology usually due to some infection and causing a narrowing or distortion of the urinary outlet. Where we have a stenosis of the urinary channel we have obstruction to the outflow of urine and sooner or

later a urinary retention. Lack of proper drainage always means some stagnation plus an infected urine. Of course, a very large percentage of these cases are due to stricture formation, but peri-urethral abscess, usually due to gonorrhea and chronic infection of the urethral glands from the same cause form a pathological picture ideal for spontaneous rupture of the urethra with infiltration of the adjacent tissues with a septic and decomposed urine. Two factors are paramount in the actual crack or rupture of the urethra; first, the continual contractions of a hypertrophied bladder against a narrowed passage; second, the actual crack or break in the wall of the diseased urethra by the passage of instruments.

Upon the anatomical location of the break in the urethra depends the direction of the infiltrating urine, the leak being anterior to the anterior leaf of the triangular ligament, the urine will burrow forward into the penis, scrotum and sometimes into the tissues over the bladder. If the leak is between the leaves of the triangular ligament, the urine will infiltrate downward toward the perineum. If the opening in the urethra is back of the posterior leaf of the triangular ligament, the course of the escaping urine will be downward to invade the perirectal space and pelvis. The first two are the common varieties and are to be considered as a possibility in inflammatory swellings of the external genitalia and perineum.

Confronted with a case with a history of stricture or chronic urinary obstruction, especially if instruments have been used, and a gradual or sudden swelling in the perineum or external genitalia with chills and fever and a general septic appearance the doctor should always rule out and certainly consider urinary extravasation.

Early diagnosis is imperative, if anything is to be done for the patient, and my object in calling the attention of the readers of *Southern Medicine and Surgery* to this subject is to impress them with the fact that extravasation is not a rare condition and that it is rapidly destructive to the tissues and equally so to life. Our experience teaches us that the condition is not generally understood by members of the profession who are not doing genito-urinary surgery. Personally, I have operated about eight cases with

the very distressing and deplorable mortality of about 80 per cent.

Little need be said about the treatment. Early diagnosis is the most important life-saving procedure because when operated on late most patients die. One can sum up the accepted treatment as follows:

It is always surgical and the operation is simple drainage—first, by urethra, if possible; then of the bladder by external urethrotomy or suprapubic cystotomy. Second, multiple and free drainage of the infiltrated areas. Third, general suppurative measures to aid the patient in combatting the urinary sepsis.

DENTISTRY

W. M. ROBEY, D.D.S., *Editor*
Charlotte

Quoting from the Twentieth Annual Report of the President of the Carnegie Foundation as published in *The American Dental Surgeon* for October:

Dentistry is an important mode of health service that is related directly to the teeth and closely adjacent oral tissues, and indirectly to other parts of the body and to the organism in general.

Dentistry should be made the full equivalent of an oral specialty of the practice of medicine in the quality and efficiency of its service to the patient.

The unusual mechanical and esthetic demands upon dentistry have, however, fully justified and continue to require its active development as a separate advanced profession.

The long continued indifference of medicine to the abnormalities and diseases of the teeth and oral tissues suggests that, if dentistry were called stomatology and added to medicine, oral health service would continue to be neglected by the medical profession.

The success with which dentists have brought dentistry to its present state of usefulness and opportunity, in the face of social disparagement and professional belittlement, and the strength of the evolution plainly in progress, indicate unmistakably that the leadership of the dental profession will develop dentistry to its full possibilities in health service.

Dentistry can be effectually and economically developed to the full service equivalence of an oral specialty of the practice of medicine through extension and improvement, in universities, of that system of dental education which, though separate from medical education, is closely related to it and should be more intimately associated with it.

This extension and improvement could be accomplished without requiring the prospective general practitioner of dentistry to become a doctor of medicine before beginning his dental training, and could best be brought about by pursuit of the following three main objectives: (a) the preliminary education and the instruction in the medical sciences should be the same in general scope and quality as

for medicine; (b) the technical training, the applications of the medical sciences, and the correlations with clinical medicine should be sufficient to assure both ability to initiate safely a dependable general practice of dentistry and capacity to grow in proficiency; and (c) the most difficult phases of dental practice should be reserved for systematic graduate study.

These three objectives could be attained through the requirement of (a) at least two years of approved work in an accredited academic college, including several courses that would stimulate interest and develop ability in the prospective practice of dentistry, or reveal ineptitude, (b) and three years of intensive and well-integrated effort in an undergraduate dental curriculum for the training of general practitioners only, some or all of the years to be suitably lengthened wherever desirable to meet special local requirements; followed by (c) optional supplementary full-year graduate curricula for advanced training in all types of dental and oral specialization.

Such a reorganization would place physicians and dentists on the same plane of intellectual quality, and would give them analogous types of health-service education. It would develop similar degrees of medical comprehension, ensure mutual respect and understanding, and facilitate intimate co-operation in the promotion of the welfare of their patients.

This general improvement in dental education would require reconstruction of the dental curriculum, with special reference to important betterment of the teaching in all of its phases, economy of time without impairment of the efficiency of instruction in dental technology, more useful application of the medical sciences, and more advantageous correlation of clinical dentistry with clinical medicine.

The proposed regeneration of dental education would necessitate, in practically all of the dental schools, prompt increase in the number of teachers of the best type, great improvement of the libraries, and active advancement of research.

Lacking endowments, and in most cases being obliged to keep the quality of their work to the level of their income from fees, the dental schools in this country and in Canada will be unable to proceed with the suggested improvement unless, individually, they receive large gifts of funds for this purpose.

These general conclusions of President Pritchett will undoubtedly meet with the approval of the leadership of the dental profession. But this same leadership, conscious of the truth of the fifth paragraph, is unwilling to be junked in a reconstruction program that fails to include it in the new structure. Recognition of "its present state of usefulness" must be included.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

ORTHOPEDIC SURGERY ALONG THE WAY

The writer has recently had the privilege

of visiting the new Shriners' Hospitals for crippled children at Springfield, Massachusetts and Montreal, Canada, and a number of orthopedic services in the general hospitals of Montreal and Boston. Occasion was taken to see as much as possible of the institutions themselves, as well as the clinical work.

One is most favorably impressed with the architecture and construction of these hospitals. As this chain of hospitals has been built, one improvement feature after another has been added until they are now about the last word in hospital construction for orthopedic purposes.

The Springfield institution, an outlay of fifty beds and accommodations for an outpatient clinic, was built at a cost of approximately four hundred thousand dollars and has every modern hospital facility in its wards, operating rooms, kitchens, brace shop and dormitory space for the workers.

The Montreal Shriners' Hospital is equally as fine and even more attractive in its location on the side of Mt. Royal, overlooking the wide St. Lawrence and the hills beyond. This is also a fifty bed unit, with special laboratories for any type of research work suggested. Here, one is especially impressed with the pleasing spacious quarters for the nursing staff and nursing aides.

Located near the Montreal Shriners' Hospital, is the Children's Memorial Hospital. The Children's Memorial is one of the older hospitals, with an associated orthopedic service. In connection with it, the Kiwanis Club of Montreal maintains an open air pavilion for the treatment of bone and joint tuberculosis. Near here is also located the special school for crippled children, and the children are delivered there each day in busses from all parts of the city.

Other institutions seen in Montreal having special clinics for the benefit of orthopedic surgeons attending the annual meeting of the American College of Surgeons, were the Royal Victoria and Montreal General Hospitals. Both of these are immense plants, long associated with the history of hospital service and medical education in Montreal. One cannot look upon them and McGill University hard by, without reminiscing, to some extent, on the lives of the great workers who brought about their creation, or contributed to their activities as they have grown, even

in wisdom and stature and in favor with God and humanity.

And the greatest life, we believe, which ever touched the art of medicine there, was the immortal Osler. Here, Osler labored and received his early medical education. It is well known that he also later labored *in the flesh* at Philadelphia, Baltimore and finally Oxford, but his spirit was not confined, and it has traveled to the uttermost parts of the earth, helping the weak, heartening the discouraged, and extending medical education in a way that will force future historians to easily rank him with Hippocrates, Galen and other great physicians to whom Osler himself so loved to pay homage.

Some of the clinical observations made as the various orthopedic workers presented their material, was about as follows:

The congenital club foot is difficult to correct and its correction should be accomplished by conservative measures, if possible, over a considerable period of time.

Congenital hip dislocations are handled by closed reductions when possible, but open operation is early resorted to in difficult cases. It is suggested that the hip be immobilized as short a time as possible in the interest of good after-motion.

Time and heliotherapy are popular in the treatment of bone and joint tuberculosis. Opening the joint to make a laboratory diagnosis of tuberculosis is being practiced in some places. It is thought by many that this will not be a permanent practice. Spine fusions for scoliosis are far from being universally accepted. Whether this is due to the complicated technique and magnitude of the operation causing it to be slowly introduced, or whether it is not to be the accepted treatment, is still to be determined. We wish the point were nearer settled.

The Hoke foot stabilization for paralytic foot deformities is popular in every clinic.

The sympathetic ramisectomy of Royal and Hunter has not been found effective in America in the treatment of spastic paralysis. The institution of the workman's compensation act, where it isn't, and the further improvement of it where it is, seems to be on the minds of surgeons generally. This constituted a symposium at one of the afternoon sessions of the American College of Surgeons.

CASE REPORTS

DEALING WITH A NUMBER OF THE PROBLEMS IN ABDOMINAL AND PELVIC SURGERY

By
H. S. LOTT, M.D.
Winston-Salem

(Cases from City Memorial Hospital)

Gall Bladder Infection, Removal. Patient admitted with diagnosis of "pelvic inflammation," which means nothing, other than failure to make a diagnosis. After a very careful study of the patient, a woman in the thirties, and of heavy build; watching her with care each day, and making survey of the abdomen by deep pressure over each of the "five points" of Morris repeatedly; all deep viscera were eliminated as causative factors save the gall bladder, over the site of which marked pain was always elicited; which, in conjunction with a history of an occasional chilliness, with recurrent attacks of yellow conjunctiva, and slight nausea, confirmed this reservoir as being the focus of origin.

Through a free right rectus incision, the gall bladder was freed, and removed entire by Keefe's clamp method; leaving the proximal clamp in situ, hooded with gauze, for forty-eight hours, after which it was removed and its track of exit permitted to close. The appendix, in this case was also removed, by simple purse string inversion, covering with meso-stump. Post-operative history, uneventful, and normal. Dismissed after three weeks, in good condition.

Fibro-myoma. Small, delicate type of woman; through whose abdominal wall an immense, irregular and nodulated mass was outlined, without being able to determine its extent, or proportions. Through a free median incision, beginning well up above the umbilicus, and extending down to the symphysis; an immense mass, of fibro-myomatous structure, was found to be filling all available space in the abdomen and pelvis. The tumor being comparatively free of adhesions, delivery was effected, the cumbersome weight being most difficult to handle with ease, or

grace. Removal—in two sections; the upper one after division of a pedicle about half way the mass, and effected without hemorrhage; and the lower, pelvic portion, by a sub-total hysterectomy, leaving the clean cervix intact. Closure, through and through, silk-worm gut. (The nurse remarked, when putting the tumor aside, that it was larger than the woman.) Post-operative history uneventful. Stitches removed on the twelfth day, because of the unusually long incision.

Fibroid uterus. Young colored woman, with fibro-cystic ovaries, and agglutinated fimbriae. Complete removal. Sub-total hysterectomy; getting a pretty good peritoneal floor covering all stumps. Through and through closure, of silk-worm gut. Post-operative, normal, and uneventful.

Gun shot wound of the abdomen. Middle aged colored woman. In shock. Point of entrance, through, and about midway of left rectus. Free incision through left rectus. Exploration of abdominal content. Seven perforations, of small bowel, with very little leakage. Repair by simple purse string, and inversion. No bullet found. Tier suture, Hopkins muffler. This woman had nothing but small sips of water, and enough morphia to prevent peristalsis, for ten days; during which time she was comfortable. Closure of incision primary, and clean. Dismissed after three weeks, in good condition.

Palpable, fluctuating mass in abdomen in colored woman, past mid-life, in region of gall bladder, and encroaching upon duodenal portion of stomach. Through a free incision in the median line the mass was found, and ruptured as soon as it was touched by the finger; freeing a quantity of clear, odorless fluid, and disappearing so completely that further exploration and surgical trauma were deemed unwise. The incision was closed. Progress of no interest until after the tenth day, and the stitches were out; the patient then developing a pneumonia which proved

fatal.

The middle-aged multipara. Heavy, sub-involuted uterus, with torn cervix, and destruction of perineum. The uterus was freely bled with a dull curette, going over the entire mucosa, and depleting its muscular walls. Perineum and cervix repaired with silk-worm gut and shot closure. Results, not ideal, perhaps fifty per cent. A hysterectomy would probably have served this patient best.

Peritonitis. Young white girl, about twenty years of age. Sent in for "appendicitis." Abdomen tense, distended, and very sensitive, with marked pain upon pressure on both sides, but most marked over the left appendages. With a temperature ranging from ninety-nine to one hundred and one or two, slight nausea, and some discomfort in voiding; the waiting plan, with ice over the abdomen, and no food save bland liquids in small quantities, was adopted. After about ten days or two weeks; the abdomen was flat, the tenderness less marked, the nausea had disappeared, the lower bowel was emptied with a small quantity of glycerine and hot normal saline solution; and the abdomen opened through a free median incision. First found, was a general, marked sub-acute peritonitis; welding all structures pretty closely together. Locating the fundus of the uterus, and tracking each way, an abscessed ovary was found on each side, with agglutinated fimbriae and infected and congested tubes, past repair. Both sides were removed, entire, by simple transfixion and lasso, with the appendix, which, caught in the conflagration, was a menace to its owner.

Because of some free pus in the abdomen, the result of a ruptured abscessed ovary in process of delivery, two deep gauze wicks were introduced, well down to the floor of the pelvis, resting in Douglas' pouch, and brought out at the lower angle of the incision. Closure above, through and through, silk worm gut. For forty-eight hours, the life of this patient was a matter of serious doubt. But she did come back, and with careful handling of the drains, and easing them out in gentle stages, the entire cavity shut down with no invasion of structures above. After four weeks of dressing, and guidance, the incision was firm in closure, and the patient

in good condition. Her subsequent history has been satisfactory, and she menstruates normally, at intervals of four weeks.

Oophoritis. Married woman, in the forties, and a mother, with an abdominal wall about four inches in thickness, and of the heavy, full type, the focus of pain in this case was very difficult to locate. However, on going deep down, on each side of the umbilicus, and just over the region of the appendages; the pain was most marked, and really distressing; but always most intense on the left side; which, together with a history of menstrual pain persistent throughout, and always most severe during the flow, led me to enter the abdomen through a free left rectus incision. Locating pelvic organs through a wall of such thickness, is difficult; but the left ovary, both to touch and vision, proved to be of the very painful, fibro-cystic type, with which no woman can live in comfort. The one of the opposite side being of the same pathologic type, the appendages of both sides were removed entire, the right side being rather difficult, working through a left rectus incision, with a four inch wall. Closure, through and through, silk worm gut; with stitches out on the tenth day, all dry. Patient dismissed after three weeks, in good condition.

"Double Hernia." Which proved to be no hernia at all, but an exaggerated, and painfully irritated varicocele of the left side, in a young boy who had been wearing a double truss, for several months, with the accompanying mental anxiety, because of his crippled condition. Rest in bed for about ten days, followed by a resection of a portion of the congested veins, brought renewed hope into the life of the boy, and enabled him to return to his job.

Hernia, Right Inguinal, Strangulated. Middle aged colored man, an immense mass filling the scrotum. Repair done by my associate, with skill and precision. A free incision, from well up above the crest of the ilium to half way down the scrotal mass. After restoring the gut, the ring was closed with hammock sutures; swinging up the lassoed stump of the sac, sutures out through muscle and fascia just above the ring, and tied. Closure

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below in tiers. (Just as an after thought, and a regret as well, it came to us that the testicle of that side should have been removed; giving greater safety for the future of a laboring man.) The post-operative history of this man was uneventful.

Ischio-Rectal Abscess. Two cases of ischio-rectal abscess, in young colored man. These cases were taken care of by my associate; my only point of emphasis in asking him to take care of them being, that he go deep to the bottom of the abscess cavity, curette with gauze tipped fingers, and fill the cavity with soft gauze pack, and let the cavity put it out, to prevent bridging, and recurrence. This is important.

Two tragedies. The first one was a middle aged woman who was sent in with a history of painful, erratic and prolonged menstruation for several years. Palpation over the abdomen, gave pain points almost everywhere; while the vaginal touch gave a fixed uterus, with tenderness, and fixed masses both on the sides, and in Douglas' pouch. Believing it to be a chronic case, and one that would prove difficult; the woman was kept on a light diet, gentle laxatives, and at rest in bed, for about two weeks; when she became normal, and seemed in fit condition for operation.

Under ether, a free median incision disclosed upon the introduction of the hand, a solid, agglutinated mass of all pelvic structures, with almost no available planes of cleavage. Freeing omentum, and gently working down, both sides were found to be made up of a mass containing each, a fibrocystic ovary, an immense hydrosalpinx, and agglutinated broad ligament, fixed to the pelvic floor. Both sides were freed, and removed, with much unavoidable trauma. The uterus, coming into the field of vision and of touch, proved to be of such fibroid degeneration, that its removal was beyond dispute for the future of the patient. By the simplest method a supra-vaginal hysterectomy was done; the stump covered, the pelvis cleaned, and closure begun. However, before this was completed, the patient ceased to breathe, and did not react.

The second one was a young colored woman, in the twenties. Her clinical history

was similar to that in the former case, and she had been under observation, and treatment for some time. Therefore, she was prepared for operation after only a few days' stay in the hospital. Under ether, and through a mid-line incision, the abdomen was opened. Just as soon as the hand was introduced, it gave the feel of being, once again, in the surgeon's "No man's land;" and that we were dealing with an acute pelvic cellulitis. Being in, planes of cleavage were sought and the agglutinated omentum and abdominal viscera freed from the pelvic organs. Every freed adhesion bled freely, causing much unavoidable depletion. The freeing of viscera from the pelvic mass, and the freeing of the agglutinated appendages from the pelvic floor, required both time, and trauma, but was accomplished; with a spent, and depleted patient, whose vitality was not great, and whose resisting power was lowered. In freeing an organized mass of adhesions about the brim of the pelvis, a vessel of rather unusual size was severed. From this accident the loss of blood was greater than should have been in any case, and especially in one whose blood count had shown its quality below normal; and this in addition to the free leakage in severing all adhesions. All hemorrhage was controlled, and the closure effected with a patient almost in collapse. In a measure there was reaction, after removing her to the ward; regaining of consciousness, and talking to those about her; but the shock, and the loss of blood were too great; and after an effort of about thirty-six hours, death was the victor.

Now! it is our failures that teach us most, and make us ask ourselves the question why? In the first of these fatal cases, the preparation, and condition of the patient were all that could have been demanded; but, being in, was it right to complete the enucleation of pathologic structures, with the fear confronting us that the surgical shock would be too great? And, in this case, this fear was realized. In the second one, with a blood count indicating a vitiated current, which was a warning signal; and had we known that the pelvic cellular structures were in the acute stage of inflammatory process; waiting, and ice, with low diet and the recumbent posture for several weeks would have been

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PERNICIOUS ANEMIA

By

D. Heath Nisbet, M.D.

Charlotte

P. H., 55, single, farmer.; Seen August 6, 1925, with the following complaints: weakness, poor digestion, constipation, vertigo and numbness in lower legs for a year; no loss of weight.

P. E.

Very pale, slightly lemon-colored skin.

Pupils—right larger than left but both re-act.

Tongue—mucosa is pale and atrophied.

Heart—normal in size. B. P. 123/58.

Lungs—clear.

Abdomen—negative.

Rectal—negative except for enlarged and boggy prostate.

Knee jerks: very sluggish; elbows normal; finger to nose normal.

F. H.

Father had similar attack at 55 but recovered; a first cousin has anemia; sister has moderate anemia.

Laboratory: Blood—whites, 7,400; reds, 1,808,000; hgb., 43%; polys, 79; lymphs, 21; much irregularity in size and shape of red cells; a few normoblasts.

Wassermann—negative.

Urine—faint trace of albumin; otherwise negative.

Stomach analysis—no free HCl.

Stool—negative.

X-ray: much spasm in pylorus which was decreased under atropine but a small irregularity persisted.

He was sent to hospital after a fainting spell two days later; dilute Hcl, nux vomica, cacodylate of soda; forced feedings were instituted.

Blood examinations:

	Whites	Reds	Hgb.	Index
8-6-25	7,400	1,808,000	43%	
8-18		1,608,000	51%	
8-27		2,496,000	51%	
9-4		3,040,000	56%	
9-8		3,112,000	80%	
9-15		2,960,000	78%	
9-23		3,144,000	82%	
10-1		4,040,000	86%	
10-9		2,880,000	68%	1.2

10-14		2,912,000	74%	1.3
10-19		3,544,000	62%	1
11-4	3,900	2,872,000	67%	1.1
12-4		2,648,000	59%	1.1
12-18	3,100	2,488,000	59%	1.2
12-31	4,900	2,880,000	61%	1.2

Transfusions:

Aug. 10-14-19-28; Sept. 4-11-18-28; Oct. 14-26; Nov. 9-22; Dec. 6-20.

In September, ataxia was noted, resembling the posterior cord type; could walk very poorly in dark and numbness in lower legs was more marked.

October 1st: Went home feeling better but returned in ten days, having lost strength and with a decrease in hemoglobin and red cells.

October 23rd: Neurological examination: weakness in upper and lower extremities, weak hand grip; no paralysis. Sight failing rapidly. Pupils unequal; gait ataxic; Romberg, marked. No loss thermic sense. Diagnosis: Posterior column degeneration; advised to use mercury and iodides as condition might be due to syphilis notwithstanding Wassermann; this was tried without improvement.

October 24th: Stool culture positive for *monilia psilosis*.

November 10th: Marked increase in weakness of extremities and is unable to support weight of body. Vibratory sense is absent up to hips and in spine to upper thoracic region. Deep muscle sense absent. Numbness marked. Cannot move feet or lift them from bed. Subcutaneous hemorrhage in scrotal wall:

December 20th: All symptoms growing progressively worse; cord involvement, inability to walk. Is mentally confused and thinks people are talking about him.

December 25-26: Was given a Christmas dinner and next day thought attempt had been made to poison him.

January 1st: Restraints necessary.

January 8th: Died.

The blood picture, the gastro intestinal symptoms, with absence of free HCl, the involvement of the posterior columns with a combination sclerosis, all point to pernicious anemia. The downward course in spite of transfusions, iron and arsenic, forced feeding, alpine lamp exposures, is also typical. The transfusions gave temporary improvement from August to October but following this he was worse each day.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

Twenty-ninth Annual Meeting, February, 1927—Columbia, S. C.

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PARTIAL PARALYSIS OF THIRD, FIFTH AND
SEVENTH CRANIALS (FROM OBSCURE
ANTRAL INFECTION?)

By
John Hill Tucker, M.D.
Charlotte

History: Mrs. O. W., 28; first seen in office March, 1924. One child, 2 years old.

Chief Complaint: Severe headache on right in frontal and parietal regions. Facial muscles of right side paralyzed. Slight ptosis of right eyelid; unable to completely close lids. Right eye turned upward and outward in orbit, and immobile.

Present Illness: Began with internal squint of right eye December, 1924. Suffers greatly with a numbness on right side of head in frontal and parietal region, some pain; in attempting to see with right eye, has double vision. Patient has not menstruated since January and is not pregnant. Menstruation previously normal. Has tingling sensation on right side of head. No twitching of any muscles; no weakness of any part of body; no shortness of breath; no difficulty in walking and no dizziness; appetite good; bowels regular; kidneys normal.

Ophthalmoscopic: No observable pathology.

Nasal, Antra and Sinuses: Clear on transillumination; no nasal discharge.

Ears: Total deafness of right ear since fourth year, as a result of pneumonia. Ear has continued to discharge a little. Left ear normal.

Urinalysis: Slightly cloudy, reaction—acid, sp. gr.—1.026, sugar and albumin—neg-

ative, indican—trace, bile—negative, microscopci: Many epithelial cells and uric-acid crystals; occasional pus cell.

Blood: Hb.—75%, whites—7,850, reds—3,784,000, color index 1 plus. Differential count: polys—67%; lymphs—30%, eos—3%.

Wassermann: Made 3-18-25: Negative.

August 7, 1925.

Dr. J. S. Hoffman, dentist, advised removal of several dead teeth. In removing upper left molars there appeared a foul discharge from left antrum. The cavity was small, but filled with a greenish and very offensive pus which was irrigated for several days through tooth socket, with extraordinary clearing up of all symptoms. Patient in 60 days quite normal and gaining in weight. Pus from antrum was not sent to laboratory.

Now the interesting feature of this case is that several trained men examined carefully this woman's eyes, ears, nose and throat and reported to Dr. J. P. Munroe negative findings. She did not complain of local tenderness nor pain in region of left antrum, and there was no nasal discharge. From a picture of total disability, distress and pain, patient was restored to health following drainage of antrum. It may not be irrelevant to note that at this time there was a decided improvement in the patient's pecuniary status. No attempt is made to fix a relationship between the dental operation and the subsidence of symptoms; nor is an explanation undertaken of the bizarre association of symptoms and relationship of symptoms, anatomically, to the sites of infection.

NEWS NOTES

THE TRI-STATE ASSOCIATION'S SOUTH CAROLINA TOUR

On their visit to the first of the four chief cities of South Carolina the members of the party of Dr. A. J. Crowell, president of the Tri-State Medical Association of the Carolinas and Virginia, were honored by special meeting of the Spartanburg County Medical

Society and an excellent buffet supper on November 2nd, and a series of clinics on the morning of the 3rd. Dr. H. R. Black welcomed the party and re-affirmed his determination to increase South Carolina's membership in the Tri-State. In addition to the program, which follows, excellent clinics were held at the Mary Black Hospital.

Papers as follows:

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Chronic Endocervicitis and Its Treatment, Dr. Cecil Rigby. Discussion by Dr. J. B. Cash, Dr. J. R. Sparkman, Dr. R. T. Ferguson and Dr. T. C. Bost.

Indications for Tonsillectomy, Dr. Martin Crook. Discussion by Dr. George W. Thompson and Dr. E. L. Patterson.

Ureteral Strictures (lantern slides), Drs. W. B. Lyles and Roy P. Finney. Discussion by Dr. A. J. Crowell.

November 3rd—9:00 to 11:00 a. m., clinics as follows:

Medical—9:00 to 10:00 A. M.—Dr. W. A. Wallace, Dr. W. W. Boyd, Dr. H. E. Heinitch and Dr. F. H. Sanders.

Pediatric—9:00 to 10:00 A. M.—Dr. D. L. Smith, Dr. C. W. Bailey.

Surgical—10:00 to 11:00 A. M.—Dr. S. O. Black, Dr. H. S. Black; The Steadly Clinic, Dr. D. D. Kinard, Dr. J. T. Carter; Dr. W. B. Lyle, Dr. R. P. Finney.

Then followed Dr. Crowell's elaboration of his conception of the unique value of the Tri-State Association and his plan for the formation of a clinical body within this organization for the utilization of the material in our southern hospitals for post-graduate instruction.

From a dozen to a score of the doctors of Spartanburg accompanied the party to Greenville for the meeting in that city.

Although the party could not arrange to spend as much time in Greenville as in the other cities included in the tour, its reception there was most enthusiastic. More than seventy doctors sat down to luncheon, during which a fine scientific program was rendered by Drs. Herrin, Guess, Grimbball and Anderson. Dr. Crowell being incapacitated by an attack of layngitis, Dr. Hall, of Richmond, presented the cause of the Tri-State Medical Association, and Dr. Northington, of Charlotte, discussed the aims of *Southern Medicine and Surgery*, the Tri-State's official organ. Dr. J. W. Jervey entertained the party most hospitably in advance of the meeting and Dr. G. T. Tyler, president of the Greenville society, forgot nothing which could tend to the success of the meeting.

In Columbia Dr. M. H. Wyman, president of the Columbia Medical Society, had arranged an excellent program for the call meeting on the evening of the 3rd and on the morning of the 4th. At the evening session The Modern Treatment of Neuro-Syphilis was discussed in a paper by Dr. J. P. Munroe. Dr. M. H. Wyman called on Dr. C. Fred Williams of the State Hospital to discuss Dr. Munroe's paper. Dr. LeGrand

Guerry of Columbia read a paper on "Hyperthyroidism."

During the meeting short talks were made by Dr. J. K. Hall of Richmond, Va., Dr. A. J. Crowell of Charlotte, N. C., president of the Tri-State Medical Association, and Dr. J. M. Northington of Charlotte.

The meeting closed with a short social session, at which the Columbia and South Carolina doctors met the visiting physicians.

Clinics were held on the 4th as follows:

(Dr. Guerry gave a statistical record of more than 2900 cases of appendicitis for which he had operated with the lowest mortality ever reported.)

BAPTIST HOSPITAL

Hospital opened for inspection.

Pernicious anemia. Case presented by Dr. J. S. Fouche; direct blood transfusion by Dr. C. K. Lindler and Dr. Watson Talbert.

Tonsillectomy by Dr. C. L. Kibler.

Presentation of cases, Dr. Benet. (1) Perforation of stomach wall and abdominal wall by ingested glass; (2) autogenous bone graft.

Presentation of case, Dr. S. B. Harmon. Ruptured duodenal ulcer with discussion and x-ray diagnosis of duodenal ulcer discussed by Dr. T. A. Pitts.

An Unusual Eye Injury, Dr. S. B. Fishburne.

Demonstration of some interesting urological cases by Dr. William R. Barron.

Demonstration of the importance of proctological examination before rectal surgery, Dr. F. M. Durham.

Lunch.

COLUMBIA HOSPITAL

Arthrodesis (operation), Dr. William A. Boyd.

Cystoscopic demonstration of two interesting cases with bladder tumors, Dr. Hugh E. Wyman.

Supra-pubic prostatectomy (operation), Dr. Marion H. Wyman.

Hysterectomy (operation), Dr. B. H. Baggett.

Clinics, Dr. R. E. Seibels, Dr. William A. Boyd, in second medical ward. (1) Acute arthritis hip (typhoid); (2) Elective Cesarean section, post-operative case discussion.

Clinical case demonstration with lantern slides, gangrenous ruptured appendix with

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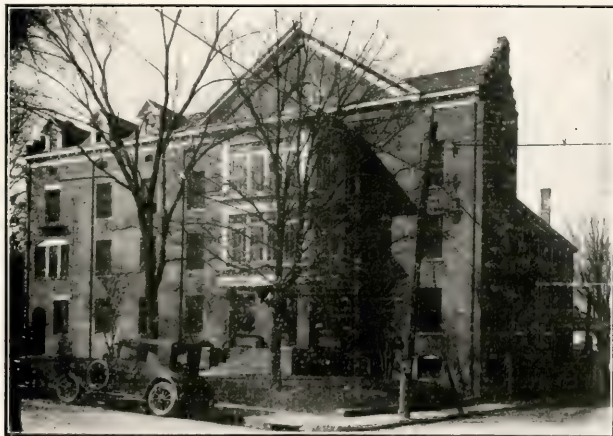
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peritonitis, second medical ward. Dr. Guerry.

Lunch.

Dr. Allison gave dermatological clinics in his office. Medical building.

Dr. Williams, superintendent of the South Carolina State Hospital, invited all physicians to visit the State Hospital and attend clinics any time between 11 a. m. and 1 p. m.

In Charleston Dr. A. E. Baker welcomed the party and conducted its members to the Roper Hospital for the special meeting of the Medical Society of South Carolina which consisted of a pathological conference of a most instructive nature, under the direction of Dr. Robert Wilson, physician-in-chief; afterward Dr. J. P. Munroe, Dr. J. K. Hall and Dr. J. M. Northington spoke briefly on the purpose and work of the Tri-State. On the morning of the 5th, clinics were held in Roper Hospital as follows:

MEDICAL

8:30 a. m.—Cases presenting problems in chest diagnosis, Dr. W. Atmar Smith.

9:00 a. m.—Psychoses; demonstrations of cases, Dr. O. B. Chamberlain.

9:30 a. m.—Diabetes; presentation of cases, Dr. John J. LaRoche.

10:00 a. m.—Auricular Fibrillation; presentation of cases and demonstration of electro-cardiographic films, Dr. J. H. Cannon.

10:30 a. m.—Pediatric cases, Dr. M. W. Beach.

SURGICAL

8:30 a. m.—Esophageal Dilatation, Dr. Josiah E. Smith.

9:00—Operation for Strabismus; demonstration of cases with Paralysis of vocal cords, presenting unique pathology, Dr. C. W. Kollock.

9:30 a. m.—Presentation of interesting Eye and Ear cases, Drs. E. F. Parker and J. F. Townsend.

10:00 a. m.—Myoma of Uterus, Dr. A. J. Buist.

OBSTETRICAL

8:30 a. m.—Toxemia of Pregnancy; demonstration of cases, Dr. Lester A. Wilson.

11:00 a. m. to 12:00 m.—Granuloma inguinalae. Presentation of cases, with discussion of symptoms, course and treatment by Dr. R. B. Gantt; discussion of bacteriology and demonstration of organism by Dr. G.

McF. Mood. Pathology of granuloma, discussed by Dr. H. H. Plowden.

Departments of Radiology and Physical Threapeutics were open all day to visitors. Interesting x-ray films on exhibition. Demonstrations given by Drs. A. R. Taft and B. R. Taft.

Among the members of the party were: Drs. C. A. Julian, Thomasville, N. C.; D. A. Stanton, High Point, N. C.; L. G. Beall and F. H. Richardson, Black Mountain, N. C.; Guy E. Dixon, Hendersonville, N. C.; F. H. McLeod, Florence, S. C.; W. P. Timmerman and A. L. Ballenger, Batesburg, S. C.; W. H. Shealey, Leesville, S. C.; M. Weinberg and C. P. Epps, Sumter, S. C.; M. H. Wyman, Columbia, S. C.; W. B. Lyles and R. P. Finney, Spartanburg, S. C.; J. K. Hall, Richmond, Va.; and J. P. Munroe, A. J. Crowell, T. C. Bost, L. C. Todd, R. T. Ferguson and J. M. Northington, of Charlotte, N. C.

M. C. V. TO CELEBRATE FOUNDER'S DAY

HONORABLE ROSEWELL PACE, second auditor of Virginia and brother of the late Thomas Nelson Page, will be the principal speaker on Founder's Day, Medical College of Virginia, December 1, 1926. This program will be built around the history of Academy Square in Richmond where the French Academy of Arts and Sciences began so auspiciously in 1786 as the first graduate school in America but failed soon thereafter on account of the French revolution, and where in 1844 the Medical College of Virginia occupied its first permanent building which is modeled after an Egyptian temple. It was in the same square also that the constitution of the United States was adopted by Virginia.

DR. WILLIAM B. PORTER, now chief of the department of medicine, Lewis-Gale Hospital, Roanoke, Virginia, has been elected whole-time professor of medicine at the Medical College of Virginia, Richmond. Next summer, after studying medical educational procedures in leading American and European universities during the coming winter and spring, Doctor Porter will take up his active work at the college.

MR. J. R. MCCAULEY, secretary-treasurer of the Medical College of Virginia, and DR. M. B. JARMAN, member of the resident staff

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of its three hospitals, the Memorial, the Doolye, and the St. Philip, will share the major duties which hitherto have been performed by Frederic B. Morlok as superintendent of the college hospitals. The four college deans will also be given increased hospital responsibilities.

WESLEY LONG HOSPITAL

On Monday, November 1st, the executors of the estate of the late Dr. John Wesley Long opened the Wesley Long Hospital as a general hospital for the care of patients, medical and surgical. Members of the Guilford County Medical Society were invited to make use of all the facilities of the hospital for their patients.

In addition to the original hospital building with its medical library, x-ray equipment, laboratory and operating rooms, the new brick annex, absolutely fireproof, has been completed and is now ready for occupancy. The annex was built under the personal supervision of Dr. Long and was the result of years of planning on his part, and its completion gives to the city and section the very latest in hospital construction and equipment. Each room has a private bath, modern furniture and other features, such as sound proof walls. The third floor of the building is given over entirely to obstetrical cases, having a delivery room, nursery, sterilizers and all necessary installations. The remaining floors have been equally well equipped for the welfare and comfort of the general patient.

The hospital will be operated under the management of the executors named in the will of Dr. Long, and they will be assisted in the active administration by Dr. H. L. Johnson and Miss Nell Ferguson.

Dr. R. B. Davis, who was assistant surgeon at the hospital during the life of Dr. Long and who has been chief surgeon since the founder of the hospital died, will continue to have his office at the hospital where he will take care of his own private patients.

THE EIGHTH DISTRICT MEDICAL SOCIETY had a meeting in Greensboro November the 4th. There were 13 papers on the program, 10 being by members, and three by invited guests. The latter papers were as follows:

Carcinoma of the Stomach, by Dr. J. Shelton Horsley, Richmond; The Treatment of Carbuncles, by Dr. W. Estell Lee, Philadelphia; The Prostate Gland in Its Relation to the General Practitioner, by Dr. H. W. Plagemeyer, Detroit.

Addresses were given by Dr. J. Q. Myers; E. S. Parker, Esquire, of Greensboro; and the beloved Dr. Cy Thompson, who was in *perfect* form.

High Point was selected as the next meeting place. Dr. F. R. Taylor was elected president; Dr. D. A. Stanton, vice-president; and Dr. H. L. Brockmann, secretary.

The meeting was called to order by the president, Dr. W. C. Ashworth, following which Rev. I. Harding Hughes, rector of Holy Trinity Episcopal church, made an invocation. The address of welcome was delivered by Mayor E. B. Jeffress.

Papers read during the afternoon session were:

Analysis of 100 Cases Under Spinal Anesthesia, Dr. J. T. Burrus, High Point. Discussion led by Dr. J. W. Tankersley, Greensboro.

Value of Periodic Health Examinations to the Profession, Dr. C. C. Hudson, Greensboro.

Otitis, Dr. F. C. Craven, North Wilkesboro.

Ephedrin in the Treatment of Asthma, Dr. Roy C. Mitchell, Mount Airy.

Hypotension, Dr. Wingate Johnson, Winston-Salem.

Duodenal Ulcer Surgically Considered, Dr. W. H. Sprunt, Winston-Salem.

Splenectomy and Some of the Rarer Blood Disturbances, Dr. T. C. Redfern, Winston-Salem.

The Pre- and Post-Operative Care of Surgical Cases, Dr. Parran Jarboe, Greensboro.

The Relation of Ophthalmology to General Medicine, Dr. A. C. Banner, Greensboro.

After the adjournment of the afternoon session all members and visitors were entertained at the Greensboro Country Club where dinner was served at 6:30 o'clock.

Dr. D. W. Holt, of Greensboro, is the efficient secretary of the district medical society.

DR. HENRY HORDING DODSON died at his home in Greensboro on October 22nd, at the age of 71. Dr. Dodson was a graduate of the

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INTERNAL MEDICINE:

C. T. Smith, M.D.

DISEASES OF THE CHEST:

W. Bernard Kinlaw, M.D.

UROLOGY:

H. Lee Large, M.D.

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S. P. Bass, M.D.

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Miss Olive Braswell, R.N.

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DR. WAITE LEONIDAS LAMBERT and Miss Julia Ross, both of Asheboro, were married on October 19th. Dr. Lambert is a graduate of Jefferson Medical College in the class of 1921.

DR. A. J. CROWELL, of Charlotte, addressed the Academy of Medicine of Richmond, Virginia, by invitation on October 26th. His subject was: The Curve of Phthalein Excretion; Its Interpretation and Clinical Use.

DR. M. L. TOWNSEND, formerly of Charlotte, where he conducted Tranquil Park Sanatorium, and was chief physician of the Veterans' Bureau, and recently an official of the North Carolina State Board of Health, has taken charge of the Chevy Chase Sanatorium, Chevy Chase, Washington, D. C., an institution for the diagnosis and treatment of nervous and mental conditions.

DR. LUTHER W. KELLY has recently established himself in Charlotte for the practice of internal medicine. Dr. Kelly was graduated from the College and the Medical School of the University of Virginia, taking the degrees of B.S. and M.D., and has served as House Officer of the Third Medical Service of the Boston City Hospital for the period of two years.

DR. S. STEWART SAUNDERS has opened offices at the Burrus Clinic, High Point. His practice will be limited to pediatrics. Dr. Stewart is of Harvard's 1924 class and has spent two years as interne and resident pediatrician at the Boston City Hospital.

DRS. W. P. BIGGART, JOHN C. MONTGOMERY, HEATH NISBET, OTHO B. ROSS and E. J. WANNAMAKER, all of Charlotte, attended the Interstate Post-Graduate Assembly held in Cleveland, Ohio, from October 18th to 23rd, inclusive.

All agreed in enthusiastic praise of the

meeting, also in their statement of the amount of will power necessitated for the constant attendance of the session, which began at 7 a. m. daily and continued with only short intermissions until 9 p. m. or later.

The total registration at the assembly approximated about 4,500 doctors.

The meeting next year will be held at Kansas City.

DR. WILLIAM W. RIXEY has opened offices in the Professional Building, Richmond, Virginia. Practice limited to rectal surgery, diagnosis and treatment of diseases of the rectum, anus and pelvic colon.

THE CUMBERLAND COUNTY MEDICAL SOCIETY met October 15th. Dr. A. S. Root gave a paper on concentrated infant feeding. Dr. C. B. McBrayer talked on "The Child's Nutrition."

Our next meeting will be held November 9th, at which time we give a dinner to the army medical officers at Fort Bragg. This promises to eclipse any medical meeting ever held in Fayetteville.

O. G. McFadyen.

The three day session of the twenty-fourth annual convention of the NORTH CAROLINA NURSES ASSOCIATION at Goldsboro was brought to a close on October the 13th. Election of officers marked the final day.

The following officers were re-elected: Honorary president, Miss Mary Wyche, Greensboro; president, Miss Columbia Munds, Wilmington; first vice-president, Miss Fannie V. Andrews, Asheville; second vice-president, Miss Mary P. Oliver, Winston-Salem; treasurer, Mrs. W. E. Shope, Asheville; secretary, Mrs. Bessie D. Powell, Wilmington.

Members of the board of directors of the association named are Mrs. E. L. Long, Raleigh, and Miss Alice Ward, Goldsboro. Members added to the board of nurses' examiners are Miss Mary E. Laxton, of Biltmore, and Miss E. A. Kelly, of Fayetteville.



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REVIEW OF RECENT BOOKS

DYSPNOEA, Medicine Monographs, Volume V, by James Howard Means, Harvard Medical School. Baltimore, Williams & Wilkins Company, 1924. \$2.25.

Monographs of this class constitute one of the most valuable means of stimulating clinical study. From whatever cause, dyspnea is an intensely disagreeable symptom, which may, and often does, become agonizing. This little book discusses the metabolic demand for ventilation; gas transport by the blood, the relation of bicarbonate, and of blood flow; the efficiency of the pulmonary bellows; dyspnea associated with mechanical and nervous hindrances; of cardiac origin, and of pneumonia; and the treatment of dyspnea.

EDEMA, Medicine Monographs, Volume III, by Leo Loeb, Professor of Comparative Pathology, Washington University, St. Louis. Baltimore, Williams & Wilkins Company. \$3.00.

Few conditions, not primary diseases, require attention oftener, longer or more repeatedly than edema. The many explanations and possible causes are discussed, always with a direct clinical bearing. Time devoted to a careful perusal of the whole book will be amply rewarded in knowledge of what to do for the comfort and longer life of such patients.

GENERAL MEDICINE, The Practical Medicine Series Comprising Eight Volumes on the Year's Progress in Medicine and Surgery, Under the General Editorial Charge of Charles L. Mix, A.M., M.D., Edited by George H. Weaver, M.D., Lawrason Brown, M.D., Robert B. Preble, A.M., M.D., and Ralph C. Brown, B.S., M.D. Series 1926. Chicago, The Year Book Publishers, 304 South Dearborn Street. \$3.00.

This volume contains the additions made in the past year to the substantial knowledge of most of the commonly encountered diseases. It is well worth the time to learn, from a work which shows there has been much sifting out of chaff, the present status of what we know and reasonably surmise of scarlet fever, measles, diphtheria, whooping cough, pneumonia, general septicemia, tuber-

culosis, the various anemias and diabetes. It is also worth the time to learn that, to date, no one knows very much about what we call *influenza*.

PRACTICAL MATERIA MEDICA and Prescription Writing, With Illustrations, by Oscar W. Bethea, M.D., Ph.G., F.C.S., Professor of Clinical Therapeutics, Tulane School of Medicine; Professor of Therapeutics, Tulane Graduate School of Medicine; Chief of Medical Staff Southern Baptist Hospital (New Orleans); A Senior Visiting Physician, Charity Hospital of Louisiana; Formerly Professor of Chemistry and Professor of Pharmacology, Mississippi Medical College, etc. Fourth Revised Edition. Philadelphia, F. A. Davis Company, Publishers, 1926. \$4.50.

Many of our best medical schools are very stingy with instruction about drugs and their methods of application. Dr. Bethea arranges his book after the old order, and recommends, with confidence born of experience, the use of those drugs which have stood the test of time. Recent drugs, not too recent for checking up, are given space.

Sound advice is given to the effect that, "while it is inadvisable for a prescriber to even try to confine himself to the Pharmacopoeia, the National Formulary and New and Non-official Remedies, they certainly contain the vast majority of drugs that should be used."

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 10, Number 1, Philadelphia Number. July, 1926. Philadelphia and London, W. B. Saunders Company.

Dr. Thomas McCrae presents a case for diagnostic study the solution of which, as he tells you will require that you "put your wits to work." The case illustrates the necessity of making a serious attempt to find out *all* that ails a patient.

The advisability of paying stricter attention to onset symptoms is emphasized by two cases presented by Dr. O. H. P. Pepper, in one of which varicocele was the first sign of kidney sarcoma, and in the other esophageal ulcer first declared itself by pain in the breast.

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"Paresis without syphilis" is presented by Dr. E. A. Strecker and Dr. Richard Kern tells us why some hay fever treatments fail. *Salvarsan poisoning, angina pectoris, and lobar pneumonia* are among the subjects treated of which concern all medical men.

Dr. Chevalier Jackson's Bronchoscopic clinic presents cases of *papillomata of the larynx, stricture of the esophagus*, and removes a kewpie doll from the larynx.

Among other subjects on which clinics are given are *precordial pain, abnormal cardiac rates and rhythms, cardio-vascular syphilis, neurosyphilis and polycythemia*.

THE SURGICAL CLINICS OF NORTH AMERICA, April, 1926, Volume 6, Number 2, San Francisco Number. Philadelphia and London, W. B. Saunders Company.

Fracture of the patella, first of the clinics, is a rather common result of automobile accidents. Panhysterectomy is condemned, and removal of the cervix after preliminary radiation recommended, as the treatment for *squamous-cell epithelioma of the cervix*.

In a discussion of *cerebral anemia and surgical risks* it is advised that in the aged and those with cardiovascular disease particularly, proneness to cerebral anemia be kept in mind. The subject of *intra-pleural pneumolysis* is exhaustively discussed and copiously illustrated. Dr. P. K. Gilman exhibits and describes an *instrument for locating and draining hepatic abscesses*.

A number of orthopedic cases are given in detail and many forms of cancer made the subjects for instructive clinics. Perhaps of most general interest because of the intimate acquaintance sustained to it by all doctors is Dr. John H. Woolsey's dissertation on "Wound Infections."

THE SURGICAL CLINICS OF NORTH AMERICA, June, 1926, Volume 6, Number 3, Lahey Clinic Number. New England Deaconess and New England Baptist Hospitals, Boston, Mass. Philadelphia and London, W. B. Saunders Company.

Medical management of patients before operating for hyperthyroidism concerns us all; likewise the other clinics on the thyroid. *The chronic cardiac as a surgical risk* will help the practitioner in advising a patient to consult a surgeon, and help the surgeon to

decide for or against operation.

Other subjects are: *esophageal cases, biliary tract disease, gastric and duodenal ulcer, ethylene, post-operative treatment, and spinal anesthesia*.

INTERNATIONAL CLINICS, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles; Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U.S.A., Vol. II, Thirty-sixth Series, 1926. Philadelphia and London, J. B. Lippincott Company.

Of general interest are the clinics on: *the chronically diseased gall bladder; the prognosis of intracranial tumors; a word on cooking, eating and other things; practical remarks on syphilis; nephritis; spirochetal pulmonary gangrene; summer diarrheas of infants; and palpation of the abdomen*.

THE CHEMISTRY OF TUBERCULOSIS, Being a Compilation and Critical Review of Existing Knowledge on the Chemistry of the Tubercle Bacillus and Its Products; the Chemical Changes and Processes in the Host; the Chemical Aspects of the Treatment of Tuberculosis, by H. Gideon Wells, M.D., Ph.D., Directors of the Otho S. A. Sprague Memorial Institute, Professor of Pathology in the University of Chicago and in Rush Medical College; Lydia M. DeWitt, M.D., A.M., Member of the Otho S. A. Sprague Memorial Institute, Associate Professor of Pathology in the University of Chicago and in Rush Medical College; Esmond R. Long, Ph.D., Assistant Professor of Pathology in the University of Chicago and in Rush Medical College. Williams & Wilkins Company, Baltimore. \$5.00.

The composition of the bacillus is first considered, it being noted that it differs from other bacteria in the possession of a greater quantity of lipin. The metabolism of the bacillus is characterized by sluggish enzymic activity and its avidity for glycerol. There is a chapter on *acid fastness* and another on *the chemistry of acid-fast bacilli other than tubercle bacilli*.

Chemical changes in tuberculous tissues makes the most interesting kind of study; directly following is a chapter on *mineralization* which should throw much light on the value of *calcium* as a remedial agent.

The study of the *chemical changes in the non-tuberculous tissues of the tuberculous subject* considers reasons for predisposition of the lungs to the disease, the thyroids and

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No. 12

RICHARD HENRY LEWIS, M.D., LL.D., F.A.P.H.A. (Hon.)

An Appreciation

J. HOWELL WAY, M.D., F.A.C.P., Waynesville

Richard Henry Lewis,—peculiarly gifted citizen, skilled physician, successful teacher, eminent sanitarian, wise counsellor, loyal friend,—first saw the light of this world at Greenwreath, on the Tar River, eight miles from Greenville, North Carolina, on February 18, 1850. He was the only son of Richard Henry Lewis and Martha Elizabeth Hoskins Lewis. Paternally he was descended from Col. Exum Lewis, of southeastern Virginia, who settled in Edgecombe County, North Carolina, about the middle of the eighteenth century, and was colonel of the militia in that county during the War of the Revolution. His son, Exum Lewis, the grandfather of the subject of this sketch, was an extensive planter and merchant of Edgecombe County. Richard Henry Lewis, the father of Dr. Lewis, died when his talented son was only seven years old. Maternally, Dr. Lewis was descended from George Durant, who removed from Virginia about 1658, settling in what is known as Durant's Neck, Perquimans County, on the Albemarle Sound. One of his maternal great-grandfathers was Joshua Skinner, also of Perquimans County, who married Martha Ann Blount. Another maternal great-grandfather was Richard Hoskins, a bold and zealous patriot, and a citizen of much influence during the Revolutionary War. His was the first name signed to the famous patriotic, "Resolutions of the Vestry of St. Paul's," at Edenton; and his wife, Winnifred Wiggins Hoskins, was the secretary of the "Edenton Tea-party," when the ladies of the community assembled and solemnly pledged themselves to no longer use tea because of the attitude of Great Britain toward the American Colonies. From this most worthy pair of patriots descended Martha Elizabeth Hoskins, who wedded Richard

Henry Lewis and to whom was born the distinguished son of whom we write.

Shortly after the death of the father, the family removed to Tarboro, North Carolina, where Dr. Lewis spent his youth, and attended the Owen School, the Tarboro Male Academy, and later Prof. R. H. Graves' justly famous School for Boys in Granville County. Matriculating at the University of North Carolina at the age of sixteen years in 1866, and returning in 1867, the young man,—though physically handicapped from early youth with a tuberculous hip, which sent him through life on crutches,—was soon recognized as a leader of men, and achieved the first honors of his classes through the sophomore year at Chapel Hill. With the closing of the University of North Carolina in 1868, he entered the University of Virginia, took diplomas in Moral Philosophy and French; and the following year began the study of Medicine in the same institution. In 1870 he attended the School of Medicine of the University of Maryland, receiving the degree of Doctor of Medicine on March 1, 1871, in the same class with the afterward distinguished Dr. George Gillett Thomas, of Wilmington, his life-long and intimate friend, as well as his eminent colleague on the North Carolina State Board of Health from 1892 to 1911. After receiving his doctorate in medicine, Dr. Lewis remained in Baltimore continuing the study of his profession for two years, during which time he served as a resident, and later an assistant physician, in the University Hospital. In 1873 he returned to North Carolina and located at Tarboro to engage in the practice of general medicine and surgery. Four months later he decided to specialize in the diseases of the eye and ear. For the work of his specialty

he fitted himself by further study in Baltimore, under the direction of Dr. Julian J. Chisholm, a native of Charleston, South Carolina, and the author of the "Manual of Military Surgery for the Use of the Surgeons of the Confederate States of America," who, removing to Baltimore after the close of the War Between the States, attained a nationwide distinction as one of the most celebrated and skilled of American oculists. On leaving Baltimore, Dr. Lewis continued his professional studies in the Royal Ophthalmic Hospital, Moorfields, London, England, and in 1875 engaged in practice as an oculist and aurist in Savannah, Ga., where he soon attracted a wide clientele, and became the teacher of his specialty in the Savannah College of Medicine and Surgery.

Marrying in Raleigh, in 1877, he removed to that city, took the examination before the North Carolina State Board of Medical Examiners, united with the State Medical Society on being licensed, and from that day to the end of his life, it may be truthfully said, no physician or surgeon more than he, graced the profession, or the society, by his life and work. In assuming the duties of an oculist and aurist in North Carolina, located at the capital city, Dr. Lewis very soon became widely and favorably known, attracting a large clientele, much of which had formerly gone to Richmond and Atlanta specialists.

In 1886 Dr. Lewis associated with him in practice his talented brother-in-law, the late Dr. K. P. Battie, jr.—a fortunate partnership of kindly and kindred spirits, lasting to the end of Dr. Battie's life in 1922. In 1915, Dr. Lewis, following his life policy of association with young and active men of the profession, associated with himself in practice Dr. John B. Wright, formerly of Lincolnton, N. C., and again later in 1922 another worthy addition was made to the firm in the person of Dr. V. M. Hicks. (Governor Angus W. McLean paid both Dr. Lewis and the appointee, a noteworthy compliment, when a few days after the death of Dr. Lewis, the Governor appointed Dr. Wright to fill the vacancy on the State Board of Health resulting from the passing of Dr. Lewis.)

Recurring to Dr. Lewis' earlier years in the profession, it is worthy of remark that

immediately on his accession to the state medical society, he assumed a position of helpful and constructive activity. The year after joining, he reported instructive cases of cataract, corneitis, and amblyopia. In 1879 he presented an admirable paper on "Spectacles in Youth," unhesitatingly combatting the prevalent professional and lay objections, and stressing the distinct therapeutic value of glasses for young people. The same year he was appointed chairman of the newly-created Section on Ophthalmology and Otology, presenting to the 1880 session its first report; a report, and an admirable resume of some of the things many practitioners could give studious thought to now with informing advantage. In 1880 Dr. Lewis was elected to fill a vacancy on the State Board of Medical Examiners, serving to the end of the term in 1884. Six years later he was chosen president of the State Medical Society, and his "President's Address," at Asheville in 1891, was a masterful presentation of the things most pertinently concerning the state's medical profession of that period, and expressed intelligently the better thought relative to the establishing of a diploma conferring school of medicine in North Carolina. *En passant*, it is of interest at the moment to note, that the same progressive and constructive institution (Trinity College, now Duke University) which had some weeks prior to the annual meeting of the State Medical Society at Asheville in 1891, "called a conference of some of the leading medical men of North Carolina to discuss measures to elevate the standards of medical education in this state," is now preparing to open a complete college of medicine of the highest grade, wholly fulfilling the requirements of the State Medical Society at the 1891 session, as evidenced in President Lewis' address, and the resolutions adopted as reported by the Committee on President's address, to-wit: "With ample endowment to pay the salaries of the professors and all the expenses, without in any way depending upon the fees of students; and whose graduates should be abundantly able to meet all the requirements of the State Board of Medical Examiners."

The proprietary medical school about this period was in its zenith of activity; and it was the thoughtful guidance of Dr. Lewis,

functioning through the legislative committee of the State Medical Society which easily put to rest without legislative action, the proposed charter for the Western North Carolina Medical College to be located at Asheville, though sponsored by some of the most excellent medical gentlemen of that city!

In 1892, the death of the distinguished Dr. Thos. F. Wood, of Wilmington, the founder of public health in North Carolina, and the Secretary of the State Board of Health from its organization, in 1877 (the year Dr. Lewis returned to his native state and resumed practice in North Carolina) to his death, created a vacancy and Dr. Lewis was unanimously elected by the members of the board as Dr. Wood's successor. As secretary of the State Board of Health for the ensuing seventeen years Dr. Lewis exercised a most potent influence for public health development inside the ranks of the medical profession, with the public at large, and as the continuing efficient chairman of legislation in the halls of the state capitol, never surpassed, if indeed equalled in this or any other state. Realizing thoroughly in the incipency of his occupancy of the office of secretary of the Board of Health, that enduring results could only come through the educated appreciation of true values to accrue, and believing in the governmental theory of leading, rather than forcing public sentiment, he resolutely set himself to the difficult task of creating in North Carolina an atmosphere favorable to the growth of intelligent and constructive health policies and legislation to render such policies effective. With a state population at that time around ninety per cent rural, plus an annual legislative appropriation for state-wide health work of a sum considerably less than an average North Carolina county now expends for such purposes, it would seem that this was an undertaking only for a super-man, but Dr. Lewis had his ideal, and though the goal seemed doubtless far away, he never faltered. He secured in 1896 the initial arrangement for an examination of public water supplies; later, in 1905, with the meager annual appropriation of \$1,200.00, the foundation was laid for the work of the State Laboratory of Hygiene; and still later, larger appropriations were secured, the scope of its activities enlarged until today, under the able administration of

Dr. C. A. Shore (one of Dr. Lewis' admirable findings of the "right man for the place") this state ranks as one of those operating one of the most efficient public health laboratories in America. In 1896, the services of a sanitary engineer were added by Dr. Lewis, and this feature of the work elaborated until in 1909 the State of North Carolina ranked as one of the three states having effective regulations for the control of its public water supplies. Writing, as he constantly was, a variety of articles for the monthly health Bulletin, and the public press in general, he by no means neglected the tuberculosis problems, and in 1906 was one of the leaders in the organization of the North Carolina State Association for the Study and Prevention of Tuberculosis, from which doubtless came the inspiration of Dr. I. E. Brooks promoting the initial legislation for the establishing of the State Sanatorium for Tuberculosis. This Association honored itself and Dr. Lewis by electing him president in 1912.

In 1909 the long-cherished desires of Dr. Lewis found tangible expression in the legislature's enacting what the Federal government through its Census Bureau was pleased to refer to as "the first practical vital statistics law enacted in the South." At first this statute only applied to towns in excess of 1,000 population; but, under the stimulus of educating the public to its health needs as he went along, in 1913 the legislature made the law applicable to the entire population, and in 1915 North Carolina, with a single other Southern State was admitted to the United States Registration Area.

With his guiding brain to suggest, the General Assembly of North Carolina, in 1909, passed the law which placed diphtheria anti-toxin within the reach of every sick child in the state. Following the visit of Dr. Chas. W. Stiles, made on the invitation of the then secretary of the North Carolina State Medical Society, to the annual meeting of the society held at Hot Springs, N. C., in 1903, where was given by Dr. Stiles his second demonstration of his belief of the widespread existence of hook-worm infestation in the South, Dr. Lewis very promptly assumed his usually intelligent and progressive attitude toward all public health problems, with the result that North Carolina

was the first state in the South to undertake active measures for the control of uncinariasis—a “by-product” of this progressive work was the discovery by the International Health Foundation that, “the man in North Carolina who supervised the field work of the hook-worm campaign was a most efficient young sanitarian,” and while the North Carolina State Board of Health lost one of its most valued of Dr. Lewis’ discoveries. Dr. John A. Ferrell became one of the I. H. F.’s useful leaders in its international efforts to better the health conditions of the world. Dr. Lewis was one of the first state health officers to recognize in the prevalence of pellagra, a public health problem, and to secure the appointment of a commission for its study.

By 1909, Dr. Lewis fully recognized that the work of the secretary of the State Board of Health had so far extended beyond the confines of its possible activities when he assumed the function of the position seventeen years before, that a full-time official was absolutely essential to the furthering of the work as planned; and with his remarkable success in convincing the General Assembly of the wisdom of his requirements in all his recommendations for health service, he saw enacted into law provisions for increased appropriations, and a requirement for the full time of the secretary. His goal had been reached and he retired from the office in which he had won local, state, national, and international fame, as a great public health administrator, being succeeded by the young man of his choice, Dr. W. S. Rankin,—the professor of Pathology in the Wake Forest School of Medicine,—to whom that most eminent of American pathologists, Dr. Wm. H. Welch, had referred some three years previously as a “most capable and efficient young man of much promise.”

Dr. Lewis was a many-sided man, and in every avenue of life he found something to interest him, and opportunity to serve his fellow man. Though a busy specialist, he yet found time to be a constructive leader. His dairy farm near Raleigh was a model in its time, and he placed on it the first centrifugal cream separator brought to the state. In 1884, as chairman of the street committee of the Raleigh Board of Aldermen, he was responsible for what is said to have been the first road machine operated in the state, and

it was his privilege to aid in drafting some of the first legislation for the improvement of rural roadways in North Carolina. To his credit stands upwards of 30 years’ service as trustee of the University of North Carolina, and for a long time he was president of the State Audubon Society. For thirty-three years he served as member of the local school board in Raleigh, and the “Lewis” High School in that city attests the respect and affection won by him in that service. St. Mary’s School for Girls, the Episcopal Diocesan College of the Carolinas, received at his hands, not only substantial aid, but more than twenty years of service as trustee. Thirty years he served as trustee and executive committeeman for St. Augustine’s (Episcopal) Normal School for colored youths of both sexes. Twenty-eight years he gladly served as professor of Eye and Ear Diseases in the Leonard Medical School for Negroes at Raleigh. For seven years, while the University of North Carolina carried on a portion of the work of its Medical School at Raleigh, he taught the same branches of medicine as in the school for colored doctors. Of him it is truly said, “he loved his fellow man!”

His reputation as one of the greatest living American public health officials found delicate appreciation at Washington, D. C., in 1905, when he was elected president of the Conference of State and Provincial Boards of Health of North America. Again his unanimous election to the presidency of the American Public Health Association, the largest and most influential health organization in the world, including as its membership does, representatives of the vast expanse of territory from Panama and the West Indies to the North Pole; and only recently though long retired from active executive or organization responsibilities in public health work, the same organization attested their appreciation of Dr. Lewis’ great life work by electing him honorary fellow of the American Public Health Association. The University of North Carolina, in 1912, honored itself and Dr. Lewis by conferring the honorary degree of Doctor of Laws; on which momentous occasion, the dean of the graduate school of the University, after recounting the many and varied distinctions attained by Dr. Lewis, concluded with the words: “dis-

tinguished above men for a rare charm of personality, for excellence as a physician and teacher of medicine, and above all, for a long and valued service in the promotion of public health." Appreciated for his personal worth, respected for his integrity and fine business judgment in material things, Dr. Lewis was ever in demand, and it is not surprising to chronicle the fact that for many years he served as a director and officer of one of the state capital's largest and strongest banks. He was a member of the Chi Psi college fraternity, a democrat in politics, and a life-long efficient and consecrated communicant of the protestant Episcopal Church, frequently attending the State Convention where he was ever the attractive center of admiring friends, as he was when attending a medical meeting.

Dr. Lewis was married three times. On February 13, 1877, to Cornelia Violet Battle, of Raleigh, who bore him four children—Richard Henry, Martha Battle, Kemp Plummer, and Ivey Foreman Lewis. Her death took place in 1886. April 16, 1890, to Mary Long Gordon; who died August 30, 1895, leaving him a daughter, Cornelia Battle Lewis. On October 27, 1897, he married Mrs. Annie Blackwell Foreman, who died October 30, 1917.

At different times over many years Dr. Lewis was confined to his bed for varying periods of a few days, weeks or months; and the last two years of his life were evidenced by increasing activity of his disease with the result of practically invaliding him at home much of the time. Yet he bravely maintained at all times his never-flagging interest in, and concern for the various affairs of life, always greeting with pleasurable interest the friends of his business and professional associations who constantly insisted on continuing to have the benefit of his advice. The writer recalls with pleasure his continued participation in the affairs of the State Board of Health, and his keen interest in the selection of a suitable successor to Dr. Rankin, as secretary to the State Board of Health, his frequent conferences with him thereon, and the concern manifested, July 21, 1926, when being advised of the board being convened in special session to elect a secretary, requested that he be permitted to cast his vote for Dr. Chas. O'H. Laughinghouse for

secretary,—his last official act in seeking to further the health work of North Carolina, which he had carried so close to his heart so many years!

His work was finished. A kindly Providence had permitted him to live his fruitful more than "three score years and ten"—years characterized by kindly and unceasing devotion to improve every opportunity to serve his fellow man, to help brighten and bless the world about him, and crowned him with the choicest honors of his profession! With a goodly appreciation of what life had been to him, with the tender sympathetic regard of thousands who knew he would probably never get out again, his body racked with pains patiently borne, daily his decreasing store of what had once been a superb endowment of spiritual resistivity to discomfiting influences; brought him nearer the end, and he waited for the coming of the boatman with an almost yearning desire—This Grand Old Man of Carolina Medicine! And on August 6, 1926, gently, sweetly, quietly, his spirit passed to the shores of eternity.

A perfect day in Carolina was August 8, 1926, when there was enacted the closing scene in the career of this great and good man, when his life-long friend, Bishop Joseph Blount Cheshire, amid an immense throng of citizens of Raleigh, Durham, Chapel Hill, Tarboro, Greenville, Goldsboro, and other Carolina cities and country places, too, with beautiful simple rites, consigned his body to its resting place among the remains of loved ones gone before in Raleigh's cemetery.

Richard Henry Lewis, the gentleman of ever kindly, courteous mien, the great and good man, the wise and skilled physician, the outstanding medical statesman of his generation in North Carolina, the loyal and patriotic citizen, the friend of humanity, lives with us now and forevermore with a record written unfadingly in the history of his native state and in the hearts of those who knew and loved him: of him it may be truly said as Kipling wrote of the passing of Lord Roberts, "Clean, simple, valiant, well beloved, flawless in faith and fame, whom neither ease nor honors moved a hair's-breadth from his aim."

QUALIFIED GENERAL PRACTITIONERS*

ARTHUR L. DENCHFIELD, M.D., Asheville

It is reputed by many and believed by some that the general practitioner is passing into oblivion, like the horse-drawn buggy or the dodo or the saber-toothed tiger, his place being taken by the modern-day specialist with his elaborate mechanical equipment and expert technical knowledge. The mass of the people, however, for many years to come, at any rate, must be served by the general practitioner. To hold his prestige and advance his own and his patient's interests it is right and proper that he be as well equipped in his own line as the specialist is in his. There is no reason why general practice should not be a specialty as truly as is practice in limited fields. The only way for the general practitioner to justify his continued existence is to make himself a more skillful doctor and consequently a necessity in our modern civilization.

To bring this about the general practitioner should increase his skill by making use of all the commonly used instruments of precision which will enable him to accurately and speedily assemble as many facts as possible to establish a proper diagnosis, and lead to proper treatment. Many of us use the thermometer and stethoscope routinely; why not use the ophthalmoscope, laryngeal mirror, sphygmomanometer, proctoscope, otoscope, microscope, anoscope and transilluminator just as freely when their use is indicated? The information yielded by these instruments of precision can only be secured by frequent practice; but facility comes with usage. Much valuable time ordinarily lost by waste should be utilized in learning the technique of these instruments. Leave the guess work out of diagnosis (it may be applied in prognosis) and know what morbid condition is to be treated. By doing so you show your patients how superior you are to the cultists.

For all except purely local affections routine use of many of these instruments should be made; they are not necessary in every

case, but when required one should show facility in their use, and after clinical observations have been made your judgment will guide you as to whether you can treat the patient fairly, or refer him to a specialist.

By means of artificial light, the lens and the ophthalmoscope, one can establish a relation between the local ocular defects and general or constitutional disease. Eye symptoms may precede or accompany these general affections which are in the province of the general practitioner. Edema of the lids, retinitis with hemorrhage and white spots accompanied by edema of the optic nerve are characteristic of kidney disease, and when ocular symptoms occur the patients, with few exceptions, do not survive longer than two years. If the kidney disease is recovered from, the eye symptoms are likewise cured. In diabetes one finds retinal hemorrhages, cataracts, iritis, glaucoma, amblyopia, optic atrophy, ocular paralyses, myopia, etc. Arthritis may cause iritis, scleritis, irido-choroiditis. In diseases of the heart and blood vessels there may be edema of the lids and of the optic nerve, retinal hemorrhages and glaucoma. Embolism and thrombosis of the retina occur in chronic endocarditis and cause sudden blindness. Pulsation of retinal vessels is frequently present in aortic insufficiency and sometimes in mitral insufficiency. Spontaneous subconjunctival ecchymoses may precede cerebral hemorrhage and may occur in arterio-sclerosis and high blood pressure. Inequality of the pupils may occur in aortic aneurism. Various infectious diseases,—as tuberculosis, syphilis, typhoid, malaria, diphtheria, and many others,—show ocular defects which the general practitioner should be able to recognize. Diseases of the reproductive organs, of the ductless glands, of the skin, digestive tract, and nervous system cause ocular defects which the general practitioner should correlate with their respective underlying conditions.

By means of the otoscope some simple conditions may readily be recognized, as im-

*Read at meeting of Tenth District Medical Society at Sylva, September 22nd.

pacted cerumen, foreign bodies, local skin affections and signs of otitis media, acute and chronic.

By means of the laryngoscope one ascertains the cause of many coughs which should not be treated with cough mixtures, and many of which should be referred to the specialist,—tuberculous lesions, tumors benign and malignant, paralyzes and acute and chronic inflammations,—some of which, however, may justifiably be treated by the general practitioner.

The sphygmomanometer should be used routinely to reveal either hypotension or hypertension. It does not take long to take a reading and it gives valuable information in diagnosis and prognosis, and in following the effects of various treatments.

Your microscope should be your best assistant. What you gain from its frequent use is well worth the time expended. In fact, many diseases cannot be exactly diagnosed without its use. Sputum, catarrhal and purulent secretions, blood, urine, feces, stomach contents, skin scrapings, spinal fluids should all reveal characteristic findings to the investigator on which correct diagnosis, treatment and prognosis is based.

Several scopes are used mainly by spe-

cialists, but should be used more freely by the general practitioner, such as the trans-illuminator, to detect sinus infections during the influenza season, the proctoscope and anoscope to detect hemorrhoids, fissures, strictures, tumors and ulcerations. The urethroscope and cystoscope are better left to the urologist.

In short, whatever instruments of precision are recognized as helpful in establishing a diagnosis should be made use of by the general practitioner with the basic idea of getting accurate findings so as to understand his patient thoroughly from the physical standpoint. The general practitioner should take advantage of every facility placed within his reach and make use of the latest developments of medical science as they pertain to his patients, especially the technical laboratories for radiography, tissue diagnosis, blood and urine chemistry and supplement all this by keeping up with modern thought and progress through the latest books and medical journals. The general practitioner can then minister to his patients up to the limit of his capacity and have no fear of the competition of state medicine or of the cultists, as he can offer better services to the public.

THE VACUUM HEADACHE; A FREQUENTLY OVERLOOKED CONDITION

CASPER W. JENNINGS, M.D., Greensboro

In the whole category of medicine there is probably no condition, which is easily diagnosed, so frequently overlooked as the vacuum frontal headache. Dr. Sluder, of St. Louis, the first man to have given publicity to this condition, deserves much credit for his original work along this line as well as in other nose and throat work.

Let us consider just what is meant by a vacuum headache. This term is applied to a condition in which the naso-frontal duct becomes blocked partially or completely, some or all of the air in the frontal sinus is absorbed; and soon we have a negative pressure followed by congestion, which is recognized as the first stage of inflammation. This is

the generally accepted explanation of the mechanics and pathology of the condition. Some of the patients have constant frontal headache; some have headache which comes on while lying down and wears off after they have been up a few hours, and others only after using the eyes for close work. These symptoms vary apparently with the degree of blocking present.

In practically all cases there is tenderness at the upper inner angle of the orbit (Ewing's point). The tenderness is brought out by pressure upward. In a few cases, on account of the bone which forms the floor of the frontal sinus being unusually thick, the tenderness will not be elicited.

In some cases this condition has to be differentiated from supra-orbital neuralgia. The supra-orbital notch is located, and pressure made at this point and at Ewing's point. If the condition is a neuralgia or a neuritis the region of the notch is the point of greatest tenderness. If the frontal is involved as in a vacuum headache or frontal sinusitis the greater tenderness will be at Ewing's point.

Of course the condition has to be differentiated from acute or chronic suppurative frontal sinusitis, but this can usually be done very readily. In the vacuum headache condition the nose is clean (no accumulation is found between the middle turbinate and the outer wall of the nose), and the frontal lights up clearly on transillumination. In these cases our best x-ray men will report no evidence of sinus disease. The space between the middle turbinate and the outer wall or the bulla ethmoidalis is crowded either by a large middle turbinate; a prominent bulla, or a high deviation of the nasal septum. In most cases the middle turbinate is responsible for the condition.

The other condition with which it is often confused and in which it often plays a part is that of headache due to eyestrain. Frequently errors of refraction and vacuum headaches are found present in the same individual. More frequently, however, we find people who have been properly refracted and fitted with glasses, who say the glasses have been of very little help to them. Many of these patients will almost jump out of the chair if pressure is made on the floor of the frontal sinus, yet many have been through the hands of very competent and well known specialists in this line without the condition being recognized.

In some cases the blocking is not complete enough to cause a constant headache and the sense of eye fatigue comes on after the

eyes have been used for considerable close work. This is misleading and is the cause of many improper diagnoses. Perhaps you will recall that one thing necessary in reading is for the eye to be turned downward and inward, and this work falls very largely on the superior oblique muscle. Furthermore, this muscle runs through a pulley which is fastened to the floor of the frontal sinus, and when this muscle is active there is considerable tugging at this point. This readily explains why use of the eyes when the frontal sinus is congested can cause headache and apparent eye fatigue.

In most cases, this condition can be relieved entirely by local applications to the middle turbinate and the middle meatus. In some one thorough application of one or one-half per cent solution of silver nitrate will give marked relief. The treatment should be continued until the tenderness as well as the pain has entirely disappeared. Sometimes it is necessary to remove the middle turbinate or to do a submucous resection of the septum, but this is not often the case.

Many of these go for months without diagnosis and have taken headache powders, and various pain relieving remedies prescribed by their own physicians for quite a long period. Instances are recalled where patients took long and expensive trips to health resorts for relief from morning headaches when, if the condition had only been recognized at home, it could have been relieved by just a few local treatments.

It seems hardly necessary to call attention to a condition so simple, so easily recognized and often so easily treated, yet it is so often overlooked and neglected and may be so annoying to the patient that we feel the foregoing remarks are justified.

Clinic Hospital Building.

The Wit of a "Lecturer"

"Years ago in reply to a critic who had accused the christian science movement of swelling its ranks from the membership of other churches, a christian scientist replied: 'My friend, we haven't come from the other churches. Most of us have come from the graveyards.'"

CARBON MONOXID POISONING; TREATMENT WITH CARBON DIOXID-OXYGEN MIXTURES*

LUTHER W. KELLY, M.D., Charlotte

During the winter months in the South carbon monoxid becomes a greater danger than is commonly realized. For the greater part of the year, the warmth of the climate demands ample ventilation in the home, factory, or garage; in winter, however, ventilation is reduced to a harmful minimum and various oil-, coal-, and gas-burning heating appliances are recalled into use usually without proper inspection or renovation in regard to the dangers from gas.

Every class of society is affected, some to a greater extent than others; the laborer due either to his occupation or to hazards in the home, the wealthy largely to the latter, and even "the man in the street" (to use this phrase literally), for subacute poisoning from automobile exhaust gas has occurred among the traffic police in some of the larger cities.¹

Since the source of carbon monoxid is the incomplete combustion of carbon or carbonaceous compounds, its history is ancient. It was known to the Greeks and was given various names in the middle ages. With the advent of illuminating and power gas there came a great increase in morbidity, and with the widespread use of the automobile a smaller increase, but one which is striking because of the class of society it affects. It is considered by some as the most important industrial poison in the United States.²

CHEMISTRY OF CARBON MONOXID

Carbon monoxid is a colorless, odorless, readily diffusible gas with a specific gravity of 0.968. With hemoglobin it forms carbonyl- or carboxy-hemoglobin, probably uniting with the iron atom as a carbonyl of iron.³ It thus resembles oxygen, but its affinity is 250⁴ times as great and when combined there is a total loss of the oxygen-carrying capacity; this, however, is restored completely on removal of the carbon monoxid.

Carbonyl-hemoglobin may be identified by the spectroscope and the amount present may

be quantitatively determined by the Van Slyke⁵ method. For practical purposes poisoning to the extent of 20 per cent saturation, which is the point at which symptoms appear, may be determined by the following simple procedure: Three to five drops of the suspected blood is diluted with water until of a uniform faint pink color and a similar sample of normal control blood is prepared using the same amount of diluent. If carbon monoxid is present to the extent of 20 per cent saturation, the first sample remains pink, while the control is yellowish⁶. If there is not a distinct difference between the two, add to each a drop of 5 per cent NaOH. The suspected sample should not change color but the control turns a dirty green.

The common sources of carbon monoxid are:

- (1) Coal gas from open fires, various types of heaters, and commercial ovens.
- (2) Illuminating gas and the various power gasses.
- (3) Mine fires or explosions and powder explosions.
- (4) Oil heaters, charcoal heaters, and smoke from fires.
- (5) Automobile exhaust gas.

It has been found in ethylene used for anesthesia and two deaths from this source have been reported recently in the literature.⁷

The Bureau of Mines Gas Laboratory at Pittsburg found the following percentages of carbon monoxid in gases from various sources.⁸

Coal gas	16.0%
Carburetted water gas	30.0%
Fuel gas	30.0%
Automobile exhaust gas (average of 101 cars of all types)	7.0%
Furnace gas of a small house-heating hot water system	1.0%
R. R. locomotive stack gas	2.0%
Smoke from a burning building	0.1%

In 1881 Gruber found that the presence of 0.05 per cent would produce symptoms; these were severe with 0.07 per cent, dangerous

*Read before the Mecklenburg County Medical Society, Nov. 2, 1926.

with 0.16 per cent, and might be fatal with 0.2 to 0.4 per cent. The factors which influence the degree of saturation of the blood following exposure to the gas are: 1. The partial pressures of carbon monoxid and oxygen in the atmosphere; 2. The duration of exposure; 3. The age of the individual, the young being more susceptible.⁹ The effects of poisoning may be augmented by pre-existing heart disease or arteriosclerosis.

The effects of carbon monoxid have been considered, for several years, as being due solely to anoxemia, but to Henderson and Haggard belongs the credit of demonstrating the factor of acapnia or carbon dioxid deficiency.¹⁰ This they show is produced by the hyperpnea occurring in the later stages of gas poisoning, the carbon dioxid is "washed out" by overbreathing and the blood is left abnormally alkaline—an alkalosis. This is followed by a gradual compensatory disappearance of the alkali, probably into the tissues, so that at this stage there is an acidosis and with it depressed respiration.¹⁰

This concept is important in the light of treatment for alkalis instead of being beneficial, as in the case of an acidosis due to the accumulation of organic acids, are actually harmful. The rational treatment then is a reversal of the process by which the acidosis

was produced, namely, the administration of carbon dioxid. This they have shown experimentally actually results in recalling the alkali to the blood, thus reestablishing a normal hydrogen-ion concentration.¹⁰

Henderson¹¹ has prepared a table for calculating the dangers of breathing an atmosphere of known carbon monoxid concentration. The individual is presumed to be at rest; the time of exposure is measured in hours; the concentration of gas expressed in parts per 10,000.

Time \times concentration = 3 no perceptible effects

Time \times concentration = 6 just perceptible effects

Time \times concentration = 9 headache and nausea

Time \times concentration = 15 dangerous.

Sayers and Yant¹² state that a long exposure to a low concentration will produce much more serious effects than a short exposure to a high concentration even though the resulting amount of hemoglobin combined with carbon monoxid is the same in each case, and this is explained as being due to the longer time that the body tissues are deprived of oxygen. In the same paper they give a table of symptoms corresponding to known concentrations of gas in the blood:

saturation
Percentage blood

Symptoms

0-10	None
10-20	Tightness across the forehead, slight headache, flushing of the face
20-30	Headache and throbbing in the temples
30-40	Severe headache, weakness, dizziness, dim vision, nausea, vomiting, collapse
40-50	Same with more probability of collapse and syncope, increased respiration and pulse
50-60	Syncope, increased respiration and pulse, coma with convulsions, Cheyne-Stokes respiration
60-70	Coma with convulsions, depressed heart action and respiration, possibly death
70-80	Weak pulse, slowed respirations, respiratory failure, death.

In any case, the stage of syncope or coma may come abruptly without premonitory symptoms.

Ordinarily in gas poisoning, the cheeks are flushed and the lips a bright red; when present this is of diagnostic aid, but there may be a cyanosis which confuses and, unless the history is definite, may lead to serious delay in treatment. In the milder cases there may be a fever and leucocytosis, but, if the patient is comatose, a subnormal temperature, thready pulse, and shallow or Cheyne-Stokes respiration is the rule. When the poisoning is acute there will often be a polycythemia and a high hemoglobin, but when chronic there is an anemia which may be extreme.¹³ Jaundice and asphyxial glycosuria have been described and if present would open up other problems in diagnosis.

PATHOLOGY

In those cases of poisoning which have ended fatally and have come to necropsy, much interest has been shown in the findings in the central nervous system. The fulminating type shows intense congestion and edema of the brain with perhaps thrombi, patchial hemorrhages, and perivascular infiltration. The more chronic case will show areas of necrosis and softening in the globus pallidus, lenticular nucleus, and the internal capsule, while in the dorsal and cervical portions of the cord degenerative changes in the anterior horn cells have been described.¹³ The media of the cerebral vessels is the seat of fatty degeneration or, at a later stage, calcification.

Areas of necrosis in the heart muscle may occur.¹⁴ The mucous membranes and the peritoneum commonly show echymoses or at least congestion, and the same is true of the skeletal muscles. The trachea and larger bronchi may be filled with a frothy blood-tinged mucus, due to the congestion of asphyxia as the gas has no irritant action, or there may be a pneumonia from the aspiration of vomitus.

Following recovery there may be merely a severe headache lasting for several hours, or this may be accompanied by nausea, muscular soreness, and weakness.

If the poisoning has been severe there may follow loss of memory especially for recent events, confusional insanity, paralyzes, or choreiform movements. Temporary blindness, localized edema, and areas of gangrene have also been described.

TREATMENT

To eliminate all hazards is impossible with our present methods of heating and cooking, with the increasing numbers of automobiles, and the use of gas and coal in the industries. The outlook is not hopeless and the first step should be the education of the public to the sources and dangers of carbon monoxid and the early symptoms of poisoning.

In the home electricity for cooking, for small room heaters, and for hot water heaters together with periodical inspection of furnaces and flues would bring hazards to an irreducible minimum. If gas is used, the piping, pilot lights, and valves should be inspected for leaks and the use of rubber tubing as a connection for room heaters should be abolished.

Forced ventilation in garages or in factories where this gas might be present, together with the substitution of electricity for gas as a source of heat or power should be encouraged.

Some of the emergency methods of resuscitation are inefficient, and in themselves not entirely free of danger. It may be well to repeat the recommendations of the American Gas Association's commission¹⁵ on this subject, namely; "that the use of . . . the pulmotor and lungmotor be discontinued; that the use of the prone pressure method of artificial respiration be broadened and encouraged in every manner possible; that cases be treated by means of an inhalation of 95 per cent. of oxygen and 5 per cent. of carbon dioxid given by a special apparatus." Before considering the third recommendation, let us return to the work of Henderson and Haggard on acapnia in carbon monoxid poisoning.¹⁶

They found that the hyperpnea which occurs in the stages of pre-coma and coma, reduced the carbon dioxid content of the blood to such a point that after removal from the poisoned atmosphere, respiration was shallow and inefficient. This means that pulmonary ventilation is low, and there is a correspondingly slow elimination of the gas. It is during this period which may last eight to ten hours that many of the pathological changes are believed to be initiated.

As the result of animal experimentation, they suggested the use of inhalations of carbon dioxid-oxygen mixtures be extended to

man as being physiologically correct and affording more rapid clinical results than any other method of treatment.¹⁶

Later reports confirmed the value of this mixture and in the proportions of 5 per cent carbon dioxid and 95 per cent oxygen it has come into widespread use not only in gas poisoning, but also in anesthesia to effect the rapid elimination of ether after operation or to combat the respiratory failure that occasionally occurs during the administration of the anesthetic.¹⁷ Its value in morphine poisoning and acute alcoholism has also been demonstrated.

Henderson, using dogs which had been poisoned with carbon monoxid to the extent of 60 per cent saturation, records the results of treatment with atmospheric air, air plus carbon dioxid, and oxygen plus carbon dioxid. There was completely recovery; i. e., less than 10 per cent saturation in twenty minutes using the carbon dioxid-oxygen mixture, while the time with oxygen alone was over an hour and a quarter; with no treatment it was nearly two hours and a half.¹¹

Walton *et al.*¹⁸ although admitting the superiority of the carbon dioxid-oxygen mixture, were unable to confirm such striking differences.

Drinker,¹⁵ in an analysis of over a hundred cases of gas poisoning treated by this method, found it much more satisfactory than oxygen inhalations in relieving the milder cases and avoiding loss of time from work, and in bringing about a rapid and complete recovery in serious poisoning.

A few cases which came under my observation were treated either with oxygen inhalations plus caffeine sodio-benzoate, or 10 per cent carbon dioxid 90 per cent oxygen inhalations plus caffeine sodio-benzoate, and the latter method was strikingly more effective. This higher percentage of carbon dioxid should be used with care in the middle aged or when there is a damaged myocardium, which may be put to too great strain by the great increase in the rate and depth of respiration, but the five per cent mixture is safe and may be used by trained gas crews as well as physicians.

Such a mixture is supplied in tanks similar to those of nitrous oxid, and can be used with the ordinary breathing bag, flutter valve and mask. There are at least three types

of inhalators now on the market. The pulmotor and lungmotor are excluded, as these are not adaptable to the increase in rate and depth of respiration produced by carbon dioxid.¹⁵

In each community where illuminating gas is manufactured or where there are similar industrial hazards, there should be a trained rescue crew equipped with an approved appliance for carbon dioxid-oxygen administration and such a crew could be supplied either by the local fire department or by the gas company. A hospital would need only the carbon dioxid-oxygen tanks, as it would already have the other equipment, and the value of this mixture not only in gas poisoning, but also in respiratory failure from other causes should make it an essential part of hospital equipment.

CONCLUSIONS

1. Carbon monoxid poisoning in its acute and chronic forms constitutes a serious menace to health and life in a community.
2. Prevention should be furthered by the more widespread use of electrical cooking and heating devices in the home and electric furnaces and power in the industries.
3. The carbon dioxid-oxygen method of treatment is physiologically correct; it is the most efficient in practice; and in each community, where the hazards warrant it, facilities for this method of treatment should be provided.

REFERENCES

1. Wilson, E. D.; Gates, I.; Owen, H. R.; and Dawson, W. T.: The Street Risk of Carbon Monoxid Poisoning, *J. A. M. A.*, Vol. 87:319-320, 1926.
2. Henderson, Yandell: Resuscitation from Carbon Monoxid Asphyxia, etc., *J. A. M. A.*, Vol. 83, 1924.
3. Mathews: *Physiological Chemistry*, pp. 492-495, 1000-1001.
4. Henderson, Yandell: *J. A. M. A.*, Vol. 67:580-582.
5. Van Slyke and Stadie: *J. Biol. Chem.*, Vol. 40:103, 1919.
6. Sherman, W. O.; Swindler, C. M.; McElroy, W. S.: Carbon Monoxid Poisoning following Ethylene Anaesthesia, *J. A. M. A.*, Vol. 86:1765-1766, 1926.
7. Stevens, A. M.: Carbon Monoxid Poisoning; gradual, cumulative effects in young children; fatal case. *J. A. M. A.*, Vol. 86:1201-1204, 1926.
8. Henderson, Yandell; Haggard, H. W.; and Coburn, R. C.: The Acapnea Theory, *J. A. M. A.*, Vol. 77:424-426, 1921. Henderson, Yandell; Haggard, H. W.: Hemato-Respiratory Functions, *J. Biol. Chem.*, Vol. 47:421, 1921.
9. Henderson, Yandell: *Brit. M. J.*, 1:41-46, Jan. 9, 1926.

12. Sayers, R. R., and Yant, W. P.: *Dangers of and Treatment for Carbon Monoxid Poisoning*, Mil. Surg., Vol. 57:64-74, 1925.

13. Sollman: *A Manual of Pharmacology*. DeLafeld and Prudden: *Textbook of Pathology*. MacCallum: *Textbook of Pathology*.

14. Gurich: J. A. M. A., Vol. 80:455, 1926.

15. Dinker, C. K.: *The Efficiency of the Oxygen-Carbon Dioxid Treatment of Carbon Monoxid Pois-*

oning: J. Indust. Hyg., Vol. 7, 1925.

16. Henderson, Yandell; Haggard, H. W.: J. Pharm. and Exp. Therap., 16:11-20, 1920.

17. Henderson, Yandell; Haggard, H. W.; and Coburn, R. C.: J. A. M. A., 74:783-786, 1920.

18. Walton, D. C.; Eldridge, W. A.; Allen, M. S.; and Witherspoon, M. G.: *Carbon Monoxid Poisoning; Comparison of Present Methods of Treatment*, Arch. Int. Med. 37:398-407, 1926.

THE TONGUE IN DIAGNOSIS*

JOHN ROBINSON IRWIN, M.D., Charlotte

The tongue is the "Engine of thoughts and bringer of ill news," says Shakespeare. In this paper, I am writing of the impressions of the tongue as an indicator of systemic conditions, and not of the lesions of the organ itself. The tongue has long been esteemed, especially by former clinicians, a reliable sentinel of medical diseases, an index pointing to a wide range of morbid affections.

In my many years of experience and practice, I have learned to confide in it as one among the most useful guides in diagnosis and prognosis.

"Let me see your tongue," says the doctor at every visit, though what he expects to learn from seeing the tongue, he would be puzzled to tell you unless it was that the patient was "bilious," whatever that means. Of course habitually seeing the tongue in disease will, unconsciously, grow some knowledge of its diagnostic value; and if the physician is a close observer, it will give him valuable aid in determining the character of disease present. But many men are so little in the habit of using their eyes, and thinking for themselves, that they learn very little.

When the careful, thinking physician tells a patient to put out his tongue, it is not because he thinks it obligatory to see whether or not this organ is the seat of disease, but because experience has taught him that the tongue is a mirror, more or less perfect, of the condition of (1) the digestive functions, (2) the blood, (3) the nervous system, and (4) nutrition and excretion. As these are

important matters indeed, just the things we want to know, we will make the tongue talk as plainly as possible.

We find the expression of disease in its form, its dryness or moisture, its coatings, its color, and its motion. And it is well to think of the subject in this methodical way, even though we are not able to follow this order wholly in this study.

The common idea of physicians is that the tongue expresses the condition of the stomach and intestinal tract, and it should be examined with reference to this; few think it may give further information. Being a part of the digestive tract, supplied by the same nerves, and invested by the same mucous membrane, we would naturally expect it to show something of the condition of the parts below. If we say that its condition may be taken as the type of the condition of parts below, we will not be far out of the way. True, there are many exceptions, but the rule is a very good one, and will hardly lead to serious error. The mind at once recognizes the changes of form, movement, condition, color and secretion, as expressions of local disease. It will not be far wrong, if it recognizes them as expressions of disease of the entire digestive apparatus.

Change of form is quite expressive. The elongated and pointed tongue expresses the condition of irritation and determination of blood to the stomach and intestinal canal, and it is safe practice to give it full weight, and to be very careful in the administration of remedies. As it is associated with excitation of the nerve centres, this is to be taken into consideration when we value the evidence with reference to the stomach and

*Read before the Seventh District Medical Society at Shelby, October 12, 1926.

bowels. If we observe this change of form early in the disease, we not only anticipate unpleasant gastric irritation through the illness and use care in avoiding irritants, but may employ means to remove it.

The full tongue, broad and thick, is evidence of atony of the digestive tract, or disturbance of the abdominal viscera. In this case the stomach and intestinal canal tolerate the medicines given, and the use of cathartics is more beneficial than in others.

Dryness of the tongue indicates deficient secretion. In acute visceral inflammations, and still more frequently in the exanthemata and in typhoid fever, the tongue is dry; it may be so dry as to cause the papillae to become prominent and the whole organ to appear roughened. This condition is one which, in acute diseases, is always to be dreaded, especially if the tongue be, in addition, of a dark color, or furred or fissured, for it is then a proof not only of arrested secretions, but also of depraved blood and of ebbing life-force.

So conditions of dryness or moisture are important evidences of the condition of the intestinal tract. If the tongue is dry, we are sure the stomach and intestinal canal can do but little work, and should be given as much rest as possible. In such cases, give food in fluid form, and above the temperature of 100 degrees. It should be carefully selected and prepared, that the labor of digestion may be as small as possible. Moisture, on the contrary, expresses a condition favorable to functional activity. True, there may be impairment of function, as when the tongue is full showing atony, or heavily coated, showing increased mucous secretion, or dirty, showing deprivation of the blood and secretions. If in acute disease with dryness of the tongue, we observe it becoming moist, we are confident of improvement, of the establishment of secretion, and indeed of all the vegetative processes. Having this meaning, it is nearly always regarded as a favorable symptom.

The color of the tongue is subject to many variations. It is remarkably pale when the blood is watery and deficient in red cells. It is exceedingly red and shiny in the exanthemata, especially scarlet fever. In the diagnosis of this disease, the appearance of the tongue is very important. For instance, the

enlargement and redness of the papillae of the tongue at the tip and edges is a very constant symptom, although in some instances it is so slight that it escapes detection, unless a careful examination is made. After the disappearance of the eruption and before desquamation takes place, the appearance of the tongue is the only symptom on which reliance can be placed. Epithelial desquamation of the tongue is a disease of the lingual epithelium which is characterized by the appearance upon the dorsum or margin of circular, elliptical or crescentic red patches, with gray margins which are slightly elevated and sometimes improperly called psoriasis of the tongue (rattlesnake tongue). Its duration is indefinite and treatment unnecessary.

As important as the color of the organ, are the color and form of its coating. In health the tongue has hardly a discernible coating; disease quickly gives it one. Perhaps the coating of the tongue scarcely has the diagnostic value attached to it by the older clinicians. Nevertheless, it gives much information and a study of it should not be neglected. The coating of the tongue may depend upon conditions local in the mouth or nasopharynx, upon causes arising from the gastro-intestinal canal; or upon general conditions. A heavy coating of the tongue is compatible with good health, and a clean tongue is not always a sign that the alimentary canal is performing its functions properly. Some persons get a furred tongue on slight provocation, while others, even in severe affections, do not. A clean tongue under conditions that cause a coating in most persons is sometimes a family characteristic. An exclusive milk diet nearly always produces a coating of the tongue, probably, chiefly because of the suspension of the masticatory movements. In diabetes mellitus it is at times remarkably clean and "beefy," on account of the excessive thirst and large draughts of water taken.

While there is much of error in the common ideas of furred tongue, something valuable may be learned. The fur which has consistence and can be scraped off, evidences impairment of function, and the wrong is generally in proportion to its thickness. If uniformly distributed it may be regarded as having reference to the entire intestinal tract;

if restricted principally to the base, we think of greater trouble in the stomach. The heavily coated tongue would call our attention to accumulations in the bowels, and would suggest means to secure their evacuation. You must recollect the distinction between the tongue itself and the fur or coating, when color is spoken of, as the one is from the circulating blood, and the other from exudation.

The motion of the tongue affords important indications. Tremulous action occurs in all conditions of the system attended with exhaustion. It is protruded slowly and with difficulty in fevers of a low type, and in nervous disorders which are accompanied by marked debility. In hemiplegia, one side is crippled and the tongue turns toward one of the corners of the mouth, showing paralysis of the hypoglossal nerve. This deviation of the tongue is the result of the action of the normal genioglossus muscle pushing the

tongue towards the paralyzed side, with an arching of the raphe. When imperfect articulation is associated with difficulty in moving the organ, it commonly announces a serious cerebral lesion.

Then anesthesia of taste is of decided clinical interest. If the disturbance of taste is located in the posterior half of the tongue, either unilateral or bilateral, we think of an affection of the glossopharyngeal nerve. In contrast to this occurrence, anesthesia of taste in the region of the anterior two-thirds of the tongue would naturally lead us to look for trouble with the nerves that supply this portion of the tongue with gustatory sensibility.

So you see that changes in the tongue are associated with systemic derangements and conditions in a wide range of morbid affections, making it a storm-sign of danger, a pathfinder and diagnostic aid to the physician.

PHYSIOTHERAPY IN SURGERY*

One Hundred Favorable Results

G. CARLYLE COOKE, M.D., Winston-Salem

There is a definite gulf between the strictly surgical and medical fields which can and must be bridged by physiotherapy if the entire category of human ailments is to receive proper or even casual attention. Under this heading are included x-ray, radium, ultra-violet radiation, photo-therapy or infra-red heat production and diathermy; and no physiotherapeutic armamentarium is complete or even capable of discharging its function unless equipped for all these methods.

Figuratively speaking, physiotherapy is a shelf of bottled sunlight each bottle consisting of light-producing radiation of a definite wave length, and in their physiological action they in no otherwise differ from each other. Now one must only consider for a moment the effect that sunlight has had on life of all kinds, to realize the importance that its proper control must have on the

pathological state, and a realization of these facts has led the productive and farsighted scientists of these and only recent days to find the definitely recognized place this branch of medicine now occupies in all clinics of the better sort.

The solar spectrum contains all the constituents which are necessary as light to support and modify all life, and these are different from one another only in wave length; the infra-red representing the extremely slow vibrations or short wave length, or low frequency; while the x-ray type represents the other extreme rapid vibrations, long wave length or high frequency with the seven elementary gradations. The infra-red radiation, or the rays of slow vibration, upon passing through a gas medium create great friction and therefore heat, also because of their slow character have no penetration powers for solids, while the x-ray and radium radiation is of such a rapid vibration as to have great

*Read before the Ninth District Medical Society meeting at Mocksville, N. C., October 7, 1926.

penetrating properties and no friction or heat production; therefore their action is chemical rather than thermal.

It then follows that different apparatus must be used in order to apply these physical agencies to the body and for the heat production photo light or infra-red light and diathermy are used. As previously stated infra-red radiation has no penetrative properties. Diathermy is a form of electrical current made to flow through the tissues with such a frequency of vibrations as to produce heat all along its course to any desired depth below the surface, while the infra-red lamps are used for applying heat to the surface, especially when it is desirable to heat a large surface. Some conditions in which there is great benefit from surface radiation are muscular pains, myositis, neuritis, areas of low vitality due to localized anemia or trauma, or any condition where it is desirable to produce pyperemia or counter irritation. In other conditions such as hypertension, nephritis, toxemias and states of poor elimination and surface infection, photo therapy cannot be replaced by any other method of sweat gland stimulation, skin activity and muscle relaxation. Patients sweat profusely, are relaxed and have their pain sensation markedly annulled. Often it is more comfort to patients than sedatives. Muscle relaxation is a very essential factor in reducing blood pressure.

Diathermy, or endothermy, is used where such effect is desired below the surface to any appreciable distance and can be applied to the most deep seated organs; among the more common conditions are deep seated infections such as pneumonia, chronic pancreatitis, salpingitis, bone infections, and ankylosed joints.

Air- and water-cooled ultra-violet apparatus are constructed of mercury quartz electric burners so as to produce available ultra-violet radiation many times greater than tropical sunlight, and they differ from each other only in chemical actions which by filtration renders the air-cooled only stimulative while the water-cooled is germicidal. Such conditions as empyema of the antrum, frontal sinuses, or middle ear, throat or nasal infections and abscesses can be readily sterilized and cured, by from two to ten treatments. This beneficial effect is enhanced by

the injection of mercurochrome 1 per cent into the pus-containing cavity.

Both depend almost entirely on surface action, but air-cooled ultra-violet rays will stimulate the skin to overcome many of its eruptions. At the same time it will increase the blood calcium metabolism to the extent that the time limit for fractured bones to unite may be lowered one-third; rickets is rapidly, almost miraculously, improved or cured.

To be fair to the title of this paper I wish to especially emphasize that these agents are of the greatest importance used in connection with surgery. Because of the fact, surgery is incomplete in its application to many disease conditions, physiotherapy may supply the deficiency and likewise physiotherapy must be aided many times in order that its full possibilities may be realized. For instance, in the case of empyema of the antrum, water-cooled ultra-violet therapy cannot be applied until the antrum has first been opened, preferably by the nasal route, and drainage effected, so that the applicator can be introduced. Surgeons generally expect the surgical procedure to cure the condition alone; but many times the antrum does not get well; and it is in just such cases that physiotherapy may be so well applied.

A greater recognition of the advantages and importance of physiotherapy in surgery and medicine can be had when we realize that it is not only our duty to cure the patient but to do so as quickly as possible, as cheaply as possible, leaving the patient as nearly as possible the same as he was before the disease condition began.

Cases treated with favorable results:

Acne	4
Antrum of Highmore	4
Chronic Ulcer	6
Pelvic Inflammatory	5
Prostatitis	3
Osteoporosis	2
Flesh Wounds	9
Fractures	4
Hypertension	4
Asthma	2
Rickets	4
Neuritis	5
Hemorrhoids	5
Ankylosis	1

Furunculosis	4	Pharyngitis	5
Tetany	1	Vaginitis	1
Deep Muscle Pain	12	Arthritis	1
Nose Ulcer	1	Chorea	1
Hemorrhagic Purpura	1	Otitis Media	3
Rhinitis	6	Hemophilia	1
Psoriasis	2		

THE RADIUM TREATMENT OF BENIGN UTERINE HEMORRHAGE*

DOUGLAS P. MURPHY, M.D., Rutherfordton

Benign uterine hemorrhage may be defined as excessive bleeding from the endometrium not associated with any demonstrable gross extra- or intra-uterine pelvic disorder. The cause has been attributed to disturbance of internal secretions, probably of the uterus or ovary, or both.

It is most frequent at the menopause, less frequent at puberty and may occur at any time during the child-bearing period. At puberty it is usually a menorrhagia. At other times the bleeding is profuse and also irregular.

Menorrhagia at puberty sometimes requires surgical interference. A single curettage is usually sufficient to regulate the flow but sometimes a second one is necessary. We have had one case, where, in addition to several curettages, a light radium exposure was required in order to check the flow sufficiently. A radium exposure, insufficient to sterilize, is employed, having no untoward effect upon normal ovarian function.

During the child-bearing period, where it is necessary to maintain menstruation, the excessive bleeding is also checked by curettage and a light radium exposure. The great bulk of patients suffering from benign uterine hemorrhage show the first evidences at, or close to, the menopause. Here the question of child-bearing need not be considered. These patients usually welcome a complete cessation of menstruation, which can be promised, if sufficient exposure is given. In treating this condition, radium shows its greatest efficiency, giving a 100 per cent cure.

For the dilatation, curettage and insertion of the radium capsule most patients prefer the associated discomfort, to the disagreeableness of a general anesthetic. The curettages are examined for evidences of malignant change. The rubber covered capsule of radium is placed in the uterine canal for about 24 hours, according to the dose desired, and the amount of radium available. During the exposure the patients suffer from nausea and vomiting in varying amounts depending upon their own individual peculiarities of resistance. This ceases upon withdrawal of the radium. After 48 hours in bed, to check any unexpected rise in temperature, the patients return home and gradually resume their accustomed occupations.

For a few weeks following the treatment there is more or less bloody discharge which gradually clears up never to return. However, where the radiation is given close to the next succeeding period the latter may take place, but that is the last one seen. There may be irritation of the bladder and rectum following treatment, but as a rule it is not severe and leaves no permanent damage. At the end of eight weeks the patients usually show a decided improvement in their general condition which is most gratifying to all concerned.

The use of radium for such bleeding is very satisfactory. One operative procedure is sufficient. A cure is effected with little inconvenience and we always hope that the treatment will act as a prophylactic against cancerous change taking place.

*Read before the Seventh District Medical Society at Shelby, October 12, 1926

A TRIBUTE TO DR. CHEVALIER JACKSON*

J. N. ROBERTSON, M.D., Fayetteville

Eye, Ear, Nose and Throat Department, Pittman Hospital

The presence of foreign bodies in the air passages and esophagus no longer makes an obscure condition, and no longer is it a condition at which both the public and the medical profession look with fear and trembling.

To Dr. Chevalier Jackson, of Philadelphia, is rightly given the credit of being the pioneer in this work and Dr. Jackson is now successfully treating thousands of patients for lung abscesses and other infectious lung conditions by direct drainage and medication through the bronchoscope. We may rightly say that an entirely new field in medical practice has been made accessible through the skillful work of Dr. Jackson.

My discussion will be mainly taken up with diagnosis and foreign bodies, as I have never felt capable of attempting any form of therapeutics.¹ Only a few men in the larger centers see these patients in sufficient numbers to keep one in practice for such work. Most of these have had special training under Jackson.

I will attempt in this slight discussion of the subject to illustrate by case reports the different types of cases that should be interesting to all of us.

In the diagnosis of tumors and growths in the air passages and esophagus it is always necessary to have a history and x-ray picture of the patient; but sometimes these fail to make us absolutely sure of our diagnosis, while with a bronchoscope and esophagoscope we can easily see a tumor mass if present, and if necessary we can obtain a specimen for examination. Of course this is a very beneficial measure in the diagnosis of obscure conditions in the esophagus and air passages.

Frequently patients consult us with a "cough and tickling in throat" when, on inspection of the throat, we may not be able to find any abnormality, while with a bronchoscope or esophagoscope we may find cicatricial

contraction, abscess, syphilitic or tuberculous conditions.

By the diagnosis and removal of foreign bodies numbers of serious operation are avoided. All of you have been confronted with such cases, and probably have more interesting case reports than mine. A case has been selected to illustrate each of the different uses which I have made of the bronchoscope and esophagoscope.

Case I, that of a white woman aged 60, suffering for two years with difficult swallowing, weakness and loss of weight. X-ray with barium meal showed incomplete esophageal obstruction in the middle third. Esophagoscope was passed under local anesthesia and a mass the size of a walnut was easily seen and examined. It bled very freely and easily and palpation with a probe showed the mass to be very hard almost completely obstructing the esophagus, preventing the passage of small scope. We felt that with the history and symptoms we could diagnose the case as carcinoma, so gave patient a very unfavorable prognosis. X-ray treatment was advised. Recently the patient's death was reported.

Case No. 2 was that of a man of 41, healthy, but for ten years had suffered with hoarseness and cough. Examination with laryngoscope showed a papilloma just below the arytenoid cartilage. This patient had been the rounds and had been treated by everyone from the chiropractor to the throat man without relief. X-ray treatment was given for a period of six weeks. Patient now coughs very little and hoarseness has completely disappeared.

Case No. 3 was that of a lady, 21, who claimed to have gotten a piece of fiber from clothing into her windpipe. Examination showed an ulcer about the size of the thumb-nail in first portion of the esophagus, which was treated with silver nitrate 2 per cent by direct application. Patient had been suffering for ten days; after three days treatment she was able to work again.

Case No. 4 was that of a child of 8 years who was playing with a nickel, which it was supposed to have swallowed. Fluoroscope showed coin in first portion of the esophagus in a fold of mucous membrane. It might be well to state here that frequently your instrument may pass the foreign body obscured by a fold of membrane, and when examining we always do what is known as retrograde esophagoscopy. The child left about six hours later apparently well. The coin was easily removed through an esophagoscope.

The next case is that of a child of two years who twelve hours previously had sucked into the windpipe a small flat whistle. Fluoroscope showed whistle at the bifurcation of the trachea. This was easily removed through a small bronchoscope. The child returned home in about sixteen hours as if nothing had happened.

Another case was that of a middle aged negress

*Read before Fifth District Medical Society, at Sanatorium, N. C., October 28, 1926.

who ten minutes previous to examination became strangled while eating pork and got a piece of bone in her throat. Laryngoscope showed a small splinter of bone stuck practically through one of her vocal cords. This was easily removed.

One other case was that of a child age of eight years, who at two years of age got something in the nose and had had profused discharge with odor since that time. Examination had been made two years ago and tonsils and adenoids removed without affording relief. With nasal speculum and forceps a pencil rubber surrounded by calcified material was removed from the middle meatus of the left nostril.

I failed to say that it is impossible to examine children without general anesthesia.

As you all see there is nothing at all unusual about these cases except that in order to use instruments successfully you must familiarize yourself with the instruments and have a thorough knowledge of the anatomy.

I would like to suggest that you never try to remove a foreign body blindly with fingers or forceps, as this will almost surely cause more trouble.

¹Editor's Note—Excellent work of this kind is being done in several cities of the Carolinas and Virginia.

PRESIDENT'S PAGE

Tri-State Medical Association of the Carolinas and Virginia

A. J. CROWELL, M.D.

The Columbia meeting of the Tri-State Medical Association, February 15th and 16th, promises to be the greatest in its history, if we are to judge by the enthusiasm manifested in our Clinical Trip through South Carolina, as well as visits made to the various Medical Meetings in the three states. The idea of a clinical organization within this body has met with approval beyond our most sanguine expectations. Such an organization will be decided upon at the Columbia meeting and you should participate in that decision. I predict it will be organized. The plan is simple, practical. Attendance will be inexpensive. It offers wonderful opportunities to those who are fortunate enough to become charter members or be selected as members thereafter. Your President is anxious to be a charter member.

Regardless of the clinical organization and its importance, the scientific program promises to be one of the greatest offered by the Tri-State. Already the program is nearly full. Dr. Hall writes me that never, since he has been Secretary, have so many papers been offered thus far ahead of the meeting.

If you wish to read a paper before this meeting, send in your title at once or you may fail to get on the program. Our evening program is already filled with valuable scientific papers by quite eminent men.

It is our wish to double the membership this year and definite plans have been made to this end. We confidently expect 500 doctors to attend the Columbia meeting. We have arranged with all the railroads for a one and one-half fare. Information as to this will be given later. The Columbia doctors and citizens are already planning for our entertainment.

Application blanks will be sent you with this issue of the Journal, with an appeal that "each member get at least one member." This should be easy and it certainly is a reasonable request. Dr. Wyman is chairman of the local committee of arrangements. This means that everything possible will be done for the pleasure and comfort of all who attend the meeting.

As President of your Association, may I not appeal to you to attend the Columbia meeting and bring at least one new member?



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Published to make the average doctor better than the average; to improve his information, his usefulness, his standing and his income.

RELATIVE IMPORTANCE

All knowledge is valuable, notwithstanding the contentions to the contrary of the vociferously *practical*; but there is a relativeness in the value of knowledge of different things, and this is particularly true of a doctor's knowledge of various diseases. In college most of us were required to study bubonic plague as carefully as organic heart disease; few practitioners in this country have seen one case of plague, and diseases of the heart headed the list of causes of death in North Carolina last year.

Following out its idea of meeting the needs of the general man in medicine, specifically, and others incidentally, *Southern Medicine and Surgery* wishes to give space to a given disease in proportion to its importance in the practice of the average doctor in this and adjoining States.

From statistics reported by the U. S. Department of Commerce we learn that the *ten diseases or conditions causing the greatest number of deaths in North Carolina in 1925* ranked in the following order: (1) diseases of the heart; (2) nephritis; (3) tuberculosis; (4) diseases of early infancy (including congenital malformations); (5) pneumonia; (6) cerebral hemorrhage and softening; (7) accidental and unspecified external causes; (8) diarrhea and enteritis; (9) cancer; (10) influenza.

These figures require some comment and additions. Manifestly several diseases were operative in many a case and influenza was certainly responsible for much of the pneumonia. Then, there is another cause which we might be justified in putting ahead of even heart disease, and this is *labor and the puerperium*. In this State, in 1925, diseases of the heart caused 3,574 deaths; those incident to childbearing 725. But not one person in every five in any State is a woman of childbearing age so the startling fact appears that *in that portion of the population in North Carolina capable of bearing children—not, mind you, only those who do—labor takes precedence over heart disease, tuberculosis and cancer and is Captain of the Hosts of Death*. That this is not true generally in this country (although our national record is inexcusably high) may be seen from a comparison with the figures for Minnesota for the same year; which are diseases of the heart 3824, childbearing 284. Minnesota records were chosen because they came to hand about the same time, and that State and North Carolina have practically the same number of inhabitants.

Does any doctor know of a journal which gives these subjects space proportionate to their importance as revealed by this listing? This journal falls far short; but it is awake to the value of such a course and it has taken many steps in that direction. Necessarily the doctors who write the essays we publish must first become imbued with the idea; then can be brought about a cycle highly advantageous to the patient,—the doctors over the section studying and writing on the every-day diseases which are killing us, and the journal disseminating these writings and encouraging extension and perpetuation of the plan.

We also wish to call attention to our desire for seasonable articles for publication. A doctor wrestling with the problems of pneumonia and chilblains does not wax enthusiastic over a dissertation on pellagra or what to do about sunburn; and those surgical conditions which tend to be evenly distributed over the twelve months lend themselves beautifully to publication in healthful months. This issue's department editorial on "Influenza" is seasonable.

Conditions which seldom are named on

death certificates deserve to be written about and thought about. The department editorial on "Carbuncle" in this issue is a fine case in point. All of us should devote more thought to making our patients comfortable, doing everything possible toward discovering and removing the cause of the disease, to be sure; but making the patient comfortable, anyway, and not being the least ashamed of "symptomatic treatment" under the circumstances. Every patient should have symptomatic treatment; curative treatment to be added as our limitations allow. The failure on the part of the reputable journals to supply detailed information along this line is largely responsible for the popularity of the brochures which tell of a good means of relieving itching, curing boils or banishing after-dinner discomfort.

This journal wants more and more the co-operation of those who can and wish to help the general practitioner, in his warfare on the diseases which are ever with him, to comfort and relieve always and cure as often as he may.

DR. WILLIAM J. MAYO HAILS CYRUS
THOMPSON

Dr. William J. Mayo cites Cyrus Thompson as an inspiration to American boyhood and as an example of the happy, satisfying, and serviceable life of the country doctor. Dr. Mayo, in the magazine, *The American Boy*, for October, says:

"Has a general practitioner in the country or in the small town any chance of making a name for himself?"

Yes.

Here's an example. Since 1881, Dr. Cyrus Thompson has been practicing medicine in Jacksonville, North Carolina, a place of 656 inhabitants, according to a reasonably recent report. Dr. Thompson has lived an unusually happy, satisfying life, and a life of outstanding service. You will get a partial record, just bare facts, by looking up his name in 'Who's Who in America.'

Dr. Thompson served six years as county superintendent of health. He has been a member of the state board of health since 1913. He has served North Carolina as a member of her house of representatives, as a state senator, and as her secretary of state.

In 1912, he was offered the nomination for governor of North Carolina, but declined it. In 1920, he served as president of the Seaboard Medical Association, an influential organization in which membership is limited to physicians residing in small places.

And all this says nothing, directly, of the men, women, and children who have found in Dr. Thompson a wonderfully wise physician, the finest kind of personal friend—though one could fill a book with fascinating stories about the individual human problems he has helped solve.

That's the record that one small-town physician has made. There are many other inspiring records."

From the medical Mecca of America to Onslow County; from Rochester, with all the equipment that every variety of specialist may use in the highest refinements of medical art, to Jacksonville, North Carolina, where one man, as doctor, druggist, dentist, nurse, technician and all the specialists in one, meets the grim reaper under many guises and at many turns and defeats him in countless contests of catch-as-catch-can, is a long, long way in space and thought. But Cyrus Thompson is a rare man and one will travel long and far to find his like.

"Cy" is the most popular, most brilliant and most generally beloved member of the medical profession of North Carolina. He is loved not so much for what he has done, although his life has been busy, benevolent, and beneficent, nor for his lifting eloquence and gripping good humor, but for what he is, for our emotions pass through and beyond deed and language and fasten upon the very essence of being.

True Dr. Thompson resides in a little town of 656 people, hidden in the pine forest of Eastern Carolina, but there is a difference between residing and living, between a residence and a life. The one may be within the narrow confines of a small town; the other as limitless as thought, as truth, as spirit. Some lives are choked within their epidermal wrappings; some are cramped within a family circle; some are confined to their block or street; some to their town; some to their county; but some are larger and the whole country is required to hold their thought, their interest, their influence; and some are

larger still, and the world is their home; and some few are as big as civilization. In the world of thought Mayo and Thompson meet; in the recognition and appreciation of the beautiful and permanent their spirits are no strangers; in the real elements of greatness they are one, and deep speaks unto deep.

The multitude spoke of blood ties, but He of larger vision and life claimed as kindred the like minded of all time and space.

W. S. Rankin.

SOME FADS IN MEDICINE

A well balanced mind is a great rarity. There are many able advocates; few competent judges. Fads, fashions and fancies make up a large part of things as they are. The law, architecture, and—notoriously—politics and theology, all are greatly given to faddism. So it should not stand as a peculiar reproach to medicine that this profession has its mistaken enthusiasms, and is prone to indulge in greater hope for any method of treatment than sane judgment would warrant.

In the last month¹ this subject is discussed thoughtfully and instructively as regards a certain realm of medical practice. The field of otolaryngology is said to be an especially favorable one for faddism.

"The indiscriminate removal of the tonsils is at the present time the outstanding fad in the practice of otolaryngology, and, I suspect, constitutes the most flagrant abuse that exists today in the practice of medicine." These are Dr. Shambaugh's strong words; and there are many of us whose observations will cause us to vote "aye" to the question. It is said that it has become almost exceptional in some parts of the country to meet an adult with tonsils, and that careful inquiry too often brings out the fact that there was never any local or general trouble attributed to the tonsils, but that the operation had been done because the tonsils were "full of pus." According to this writer, "the recognition of pus in the tonsils is of such rare occurrence that it is at once apparent that the cheesy concretions found universally in the tonsils, at least of adults, have been mistaken for pus."

Many other abuses are complained of, as:

¹Fads and Fancies in Otolaryngology, Geo. E. Shambaugh, M.D., *Jour. A. M. A.*, Nov. 20.

too much surgery on the sinuses when symptoms are not supported by physical findings, operations on the ethmoid for the relief of various throat symptoms, and nasal operations in cases of deafness. Comment is made on the man who always has some tinkering operation to suggest for any local symptoms, and the temporary popularity he enjoys because he can be depended on always to "do something."

Probably the unnecessary tonsil removals greatly exceed in number the aggregate of all other abuses in this field. The editor has heard a teacher of laryngology in one of our great universities say that the mere presence of tonsils was adequate reason for their removal; and there is abundant reason for belief that many others conduct their practice on the same theory.

Many who have set themselves up as specialists in this branch of medicine had no adequate training in general medicine and some have had almost nothing at all of special training. In too many instances "pus" is evacuated which would show no pus cells under the microscope; and whatever may be the meaning of "abscessed tooth," the term is certainly not confined to a tooth bearing any definite relation to "a localized collection of pus surrounded by a wall of lymph."

Dr. Shambaugh's rich, broad and long experience, and his exceptional opportunity for following up an enormous number of patients who have and who have not been submitted to operation, entitles his opinions to grave consideration.

His words of warning and protest should not fall on deaf ears. The general practitioner should not refer a patient for tonsillectomy because he can think of nothing else to do for him and he still has tonsils; the operator should not remove tonsils except in the presence of *definite indications* and when there is more than an even chance of benefit being derived proportionate to the risk *and the expense*; tonsils should not be removed on the *diagnosis* of a school teacher or nurse.

AN APPEAL TO CAESAR; AND CAESAR'S JUDGMENT

Recently there has come to our attention an editorial in the excellent *Texas Medical Journal*, for February, 1923, which presents,

as we used to say of bones, many "points of interest." The subject is "Peddling Prayer," and the matter dealing with certain christian science activities, leads up to and quotes the conclusion of the Supreme Court of Nebraska in the case of State vs. Buswell:

"The defendant relied upon the teachings of the Bible as his authority as a Christian Scientist. It will not, therefore, be amiss to refer to it for instances applicable to his case. In the eighth chapter of Acts of the Apostles, we find an account of Simon, a sorcerer, who had used sorcery, and bewitched the people of Samaria, giving out that himself was some great one. This Simon was thought to be the possessor of great power. Under the ministrations of Philip, he believed, and was baptized. Thereafter, sufficient for our purpose, there follows a statement of the conduct of this convert, beginning with the eighteenth, and ending with the twenty-third verse of the chapter just cited. These verses are as follows:

"18. And when Simon saw that, through laying on of the apostles' hands, the Holy Ghost was given he offered them money.

"19. Saying, Give me also this power, that on whomsoever I lay hands he may receive the Holy Ghost.

"20. But Peter said unto him, Thy money perish with thee, because thou hast thought the gift of God may be purchased with money.

"21. Thou has neither part nor lot in this matter; for thy heart is not right in the sight of God.

"22. Repent, therefore, of this thy wickedness, and pray God, if perhaps the thought of thine heart may be forgiven thee.

"23. For I perceive that thou art in the gall of bitterness, and in the bond of iniquity."

"It would seem, from this account, that Simon regarded the gift of the Holy Ghost, by the laying on of hands, as something akin to, and an improvement upon the sorcery which he himself had practiced, and, therefore, that its advantages were proper subjects of barter. The language of Peter 'Thy money perish with thee, because thou hast thought that the gift of God may be purchased with money,' was a most emphatic and authoritative refutation of the idea that this special gift of God could form a proper basis for money transactions. The universal reprobation in which the conduct of Simon has ever been held has crystallized in the Latin word "*Simonia*," the English word "Simony," etc.; the derivative, in each instance, signifying either the crime of buying or selling ecclesiastical preferment, or the corrupt presentation of any one to an ecclesiastical benefice for money or reward. In the case at bar, the defendant testified as follows: 'Q. You may state whether or not you make charges when people come to you for advice or when you go to them. A. As a rule I do not. We tell them we leave the question to them and God. I spend my whole time at work, showing the people, through examination and administration, what the teachings of the Scripture are; and Jesus says the laborer is worthy of his meat (?) and we expect that those whom we spend our time for to remunerate us for it. If they are not willing to part with the sacrifice themselves, it is not expected that those should reap the benefit.' This language puts the matter of compensation in a milder form than that adopted by Simon in the case above cited, but that even this modified claim is open to serious objection we think

still further illustrated by an instance to which reference will not now be made. In the first chapter of the Second Book of Kings, there is an account of the healing of Naaman of leprosy by compliance with a very simple hydropathic course of treatment prescribed by the prophet, Elisha. After he was healed, Naaman said to Elisha, 'I pray thee take a blessing of thy servant; but Elisha said, 'As the Lord liveth, before whom I stand, I will receive none.' An he urged him to take it, but he refused. The subsequent proceedings are best given in the language found in verses 20 to 27 inclusive.

"20. But Gehazi, the servant of Elisha, the man of God, said, Behold my master has spared Naaman this Syrian in not receiving at his hands that which he brought; but as the Lord liveth, I will run after him, and take somewhat of him.

"21. So Gehazi followed after Naaman. And when Naaman saw him running after him, he lighted down from the chariot to meet him, and said, Is all well?

"22. And he said, All is well. My master hath sent me, saying, Behold, even now there be come to me from Mount Ephraim two young men of the sons of the prophets; give them, I pray thee, a talent of silver, and two changes of garments.

"23. And Naaman said, Be content, take two talents. And he urged him, and bound two talents of silver in two bags, with two changes of garments, and laid them upon two of his servants, and they bare them before him.

"24. And when he came to the tower, he took them from their hand, and bestowed them in the house; and he let the men go, and they departed.

"25. But he went in and stood before his master. And Elisha said unto him, Whence comest thou, Gehazi? And he said, 'Thy servant went no whither.'

"26. And he said unto him, Went not mine heart with thee, when the man turned again from his chariot to meet thee? Is it time to receive money, and to receive garments, and olive yards and vineyards, and sheep, and oxen and men servants, and maid servants?

"27. The leprosy therefore of Naaman shall cleave unto thee, and thy seed forever. And he went out from his presence a leper as white as snow."

"In chapter 22 *et seq.* of Numbers is recorded God's disapproval of Baalam's partly executed project of profiting by the use of the Divine power with which he was endowed.

"In the light of these instances cited from the defendant's own authority, it is confidently believed that the exercise of the art of healing for compensation, whether exacted as a fee or expected as a gratuity, cannot be classed as an act of worship. Neither is it the performance of a religious duty, as was claimed in the district court. There is no claim in this case that compensation, in one or the other of these methods, was not accepted when tendered. The evidence affirmatively shows the contrary. Not only is this true, but we find a very considerable part of the defendant's brief devoted to an argument as to the inefficiency of the established and recognized modes of treatment in nature of diseases, as compared with the defendant's method, as tested by the results attained. The evidence upon which the case was tried convinces us that the defendant was engaged in treating physical ailments of others for compensation. He was within none of the exceptions provided by statute. The instruction which required that, to a conviction, he should be found guilty of practicing medicine, surgery or obstetrics, as generally or usually understood, was erroneous. The object of the statute is to protect the

afflicted from the pretensions of the ignorant and avaricious, and its provisions are not limited to those who attempt to follow beaten paths and established usages. To conservatism resulting from the study of standard authors might somewhat be depended on to minimize the evils attendant upon unlicensed practitioners' attempts to follow regular and approved methods, although, as against even those, the law should be enforced. Still more stringently should its provisions be rendered effective against pretensions based upon ignorance, on one hand, and credulity, on the other. The statute does not merely give a new definition to language having already a given and fixed meaning. It rather created a new class of offenses, in clear and unambiguous language, which should be interpreted and enforced according to its terms. Under the indictment the sole question presented, upon the evidence, was whether or not the defendant, within the time charged, had operated on, or professed to heal, or prescribe for, or otherwise treated, any physical or mental ailment of another. There was involved no question of sentiment, nor religious practice or duty. If the defendant was guilty as charged neither pretense of worship nor of the performance of any other duty, should have exonerated him from the punishment which an infraction of the statute involved. In cases presented as is this case, no judgment can be rendered in this court, and therefore none will be attempted. The exceptions of the county attorney are sustained."

There was a court alive to its responsibilities, possessed of the requisite knowledge of the Scripture from which authority was claimed, and like John Randolph, of Roanoke, neither afraid nor ashamed to use ridicule, "as fair a weapon as any in the armory of debate,"—and among the most efficacious.

Many quote (at) the Bible and the Constitution: few read either with any great increase in their stores of knowledge. This was not only a Court of Law but a Court of Justice as well; Justice based on statute law, common law, biblical tradition and sound human reasoning.

THE PHILOSOPHY AND SCIENCE OF PUBLIC HEALTH

"A broadside against one of the last relics of the age of chivalry was delivered yesterday by Dr. W. A. McPhaul, city-county [Charlotte-Mecklenburg] health officer, when he decried the general practice of removing hats in elevators at the entry of women.

'It's all foolishness,' said the doctor. 'Rank foolishness. Why wouldn't it be just as impolite for a man not to remove his headpiece on a street car or in a railway train or a department store?'

Nothing is more ridiculous, the doctor thinks, than the practice. Observe a crowded business elevator. A woman enters. There is an immediate jostling as the Lord Chesterfields snatch at their lids.

Those who hold their hats above the majority of men will concur in (sic) as they emulate the Statue of Liberty's pose. Those who hold them down have them mashed. Either is bad.

There is another standpoint—the sanitary. Men who hold their hats high are bound to shake dandruff or some scalp disease from their hat. There may be someone who will catch the disease in this manner.

'If we take a common-sense attitude, I believe it will be agreed that the practice is one which should be abolished. I believe that the majority of men will concur in this. The women, for the most part, hold to the custom for more or less sentimental reasons.'

—Charlotte *Observer*, Dec. 1.

DEPARTMENTS

MENTAL AND NERVOUS

JAMES K. HALL, M.D., *Editor*
Richmond

IS THERE RELIGIOUS FREEDOM?

Thomas Jefferson experienced long-drawn-out difficulty in making free from the thrall-dom of the established church the citizenship of his native state of Virginia. But at last he succeeded. And in his latter days he thought the success of his effort of sufficient consequence to be graven as one of his three great achievements on his tomb. The fact that he had been twice president of the nation was of such relative unimportance that he left it clear out of account. His statement that all men are created equal was rhetorical and was made undoubtedly for political appeal. Such a statement has never been literally true. All proper government is designed to give the weaker and the unequal opportunities in compensation for existing weaknesses and handicaps.

The approaching national campaign will undoubtedly be fought out about the religious issue. Voters will be called upon to make a decision within their own minds as to whether or not this is a country of religious liberty in which individuals shall have the right to worship as they please, or not at all, without being held accountable at the ballot boxes for their beliefs, and the symbolisms through which those beliefs largely manifest themselves. It is high time the issue were settled. It will be well for a great religious body to have the opportunity through one of its outstanding members to demonstrate to the citizenship of the nation whether or not he can act nationally without being encumbered by the fettering restraints of external sectarian authority. And such a campaign would afford the voters of the country the opportunity to discover whether century-old talk about religious freedom in this country is meaningless or a living reality.

Thomas Jefferson had no desire to destroy the Church of England. He was a member

of it, and an officer in his parish. But he succeeded in demonstrating to his own church that it could function better in detachment from the state government.

The time would seem to be at hand for the voters to demonstrate to themselves and to such members of any organized band of religionists that may need the instruction that this is a land of religious liberty, in which one may worship as he will, or not at all, without being held accountable on election day for the type of worship.

There can be no religious freedom, nor indeed any other kind of freedom, where there is fear. Fear always means slavery. Sometimes one is afraid of an object and sometimes one is afraid of one's own fear of the object. Now is the time for our citizenship to take steps to rid themselves of the fear that a great religious body is planning to gain dominance over the national civic life. Now is the time for that ecclesiastical organization to demonstrate that its concern is about the spiritual side of man and not the political. In the greatest state in the Union the atmosphere has been cleared. Why can it not be cleared throughout the nation?

At any rate the observant physician is going to have a splendid opportunity to witness a nation-wide stirring of the emotions. The ballots of most people are cast by their feelings, not by their intellects.

UNCLE SAM, DOCTOR OF MEDICINE

Recent press dispatches carried the news that the highest court of the nation had spoken in approval, and, therefore with judicial finality, of that provision of the national prohibition act which makes it illegal for a physician to administer to one patient a quantity of whisky in excess of sixteen ounces within a period of ten days. It would be interesting and also informative to be able to discover within what particular congressional cranium the idea first sprouted and then sprang to full pharmaceutical maturity that an even pint of whisky when stretched

out over an administrative-period of ten days constitutes a drug, but if given beyond the ten-day limit becomes a beverage. If a pint of whisky be given throughout the legal ten-day period in equal daily quantity the total daily administration could not go beyond twelve and eight-tenth teaspoonfuls. That means about one tablespoonful three times a day. But in what way and within what senatorial calvarium was the notion born that all diseases that need medication by alcohol taken internally must terminate either by death or by recovery at the expiration of ten days? I have known cases of typhoid fever, of pneumonia, of influenza, and of general sepsis to last much more than ten days. And I have known good physicians who were also good citizens to give to patients in such conditions as much, nay, more, than half a pint of corn whisky within a period of twenty-four hours—and to continue such administration day after day, until recovery or translation of the sick person came about. There is in North Carolina at this moment an old, old doctor who has done such a thing in the olden days many and many a time, and yet I have no doubt that his conscience is clear with reference both to the morality of his conduct and the wholesomeness of his therapy.

I could never be an architect. It would be impossible for me to project from my brain out into the unoccupied space before my eyes the house that exists only in imagination. Yet if I might have such imaginative gift I should not like to make use of it in picturing the National Congress in assembly at the bedside pouring from a flask three times a day a tablespoonful of whisky, handing it to the attending doctor, with the Federal Court solemnly standing by and lending the approving nod. Many, many things in our national life are wrong and some of them are bad, but legislative efforts to correct many of the bad things are grievously worse. And amongst these latter would I catalogue the successful effort of the misguided to confer upon our benevolent Uncle Samuel the degree of Doctor of Medicine.

SURGERY

GEORGE H. BUNCH, M.D., *Editor*
Columbia

CARBUNCLES

Our own Dr. Hubert Royster, of Raleigh, the distinguished president of the Southern Surgical Association, in an address before the South Carolina Medical Association once said, "There may be minor surgeons but there is no such thing as minor surgery." This statement is correct and it is nowhere better illustrated than in the consideration of carbuncles. They are everywhere put under the head of minor surgery but their gravity and seriousness is not appreciated. Indeed, we have nowhere been able to find a definition of carbuncle that fits our conception of the pathology. In our edition of Adami's *Principles of Pathology*, perhaps the most comprehensive work on the subject in the English language, carbuncle is not even mentioned. In other pathologies and in surgeries it is described as a superficial infection of the skin with several outlets for the pus, differing only in extent from a boil and being essentially a crop of coalescing boils. We think the difference between carbuncle and boil has to do with the depth rather than with the extent of infection. In a boil the pus is superficial; it is outside the fascia and can be readily drained. In a carbuncle the pus is below the fascia and follows the lines of least resistance, breaking through the fascia wherever there is a weak place. This explains the low flat outline of a carbuncle and the multiple craters or outlets. The pus under tension explains the great absorption and toxemia; it explains the rapid spread of the infection and the constantly increasing size of the indurated area. In time boils, by spontaneous drainage, cure themselves; carbuncles rarely do. A carbuncle may be as large as a saucer and cover the back of the neck from above the hair line to below the level of the shoulders. The toxemia from such a lesion is overwhelming and unless the patient is soon relieved he must die. We know of few more dangerous situations in surgery. An ex-mayor of Columbia died of a carbuncle a few weeks ago. The adjutant general of South Carolina died of carbuncle

four years ago. Statistics are not available but the death rate from carbuncle, I venture to state, would surprise us all.

The treatment of carbuncle to be effective must be radical. Diabetics are predisposed to skin infections. Joslin says in his opinion neglected carbuncle is the most serious surgical complication of diabetes. In every case of carbuncle the urine should be examined for sugar and if there is a history of abnormal thirst with polyuria, hunger, and loss of weight a blood-sugar examination should be made. If the patient is diabetic we must be sure he is in condition for operation. With glucose and insulin in skilled hands diabetics can be made safe surgical risks. Nitrous oxide is the best anesthetic. Local anesthesia is not effective because the tissues are already infiltrated with inflammatory exudate and there is no room in them for the novocain solution. If the carbuncle is small and the general condition of the patient warrants it crucial incision may suffice, but if the lesion is large and the patient toxic, excision is imperative. By going in healthy tissue widely and deeply around the lesion the whole pathology can be removed en masse. After excision in a few hours there is a transformation in the patient. The absorption stops; the temperature falls; the toxemia goes; the crisis has passed; the patient is relieved. The worst objection to the treatment is the scar but a life has been saved and we think the radical surgery amply justified. In some clinics carbuncles are treated with x-ray. We have had but little experience with the method. It does not appeal to us. No doubt the cosmetic effect is good but where there is pus under tension, with increasing toxemia and rapidly spreading infection, excision with complete removal of diseased tissue is the best and safest treatment. It is literally a life saving procedure.

LABORATORIES

HARVEY P. BARRET, M.D., *Editor*
Charlotte

THE VALUE OF A DIFFERENTIAL COUNT IN VARIOUS DISEASES

In a former article the value of blood su-

In a former article the value of blood smear examinations of the various elements of the blood was described. Mention, only,

was made of differential white counts.

In this and subsequent papers the differential white counts in certain of the commoner diseases will be taken up.

From the standpoint of differential counts diseases may be divided into: (1) Those in which there is an increase in the polymorphonuclear neutrophile cells; (2) those in which the mononuclear cells are increased; and (3) those showing an increase in eosinophile cells.

Although the differential count is used quite a good deal in a limited number of diseases it is not used as frequently or in as many different conditions as it might be.

There are a number of diseases in which it may be a very valuable aid in diagnosis and especially in differential diagnosis. The diseases in which the lymphocytes are increased will be taken up in the present paper.

The mononuclear cells of the blood are classified as large lymphocytes, small lymphocytes and large mononuclears.

The small mononuclears (small lymphocytes) make up about thirty per cent of the total leucocytes in adults and about fifty per cent in children. The large lymphocytes make up about six per cent of the total leucocytes, the large mononuclears one per cent. For all practical purposes the mononuclear cells may be placed in one class and called lymphocytes.

The diseases in which the lymphocytes are increased and in which the differential count of the leucocytes are of most value are:

1. Typhoid fever
2. Malaria
3. Whooping cough
4. Lymphatic leukemia.
5. Influenza.

1. Typhoid fever—It is understood, of course, that a differential count does not make the diagnosis in any disease, that it should always be considered as an aid in diagnosis or in differential diagnosis. For the diagnosis of typhoid the most reliable aid in the first week is a blood culture. In the third week and thereafter a Widal reaction reaction is the best single laboratory test. In this day when so many are vaccinated against typhoid a Widal reaction is not very reliable, as the blood may show agglutinins for many months after vaccination.

A leucocyte count with a differential leucocyte count is very valuable and reliable in all stages of the disease. The leucocyte count is practically always low, the average count being about 5,000. A differential count shows a decrease in the polymorphonuclears, an almost total absence of eosinophiles, and a high lymphocyte count. The lymphocytes make up 40 to 50 per cent of the white cells.

2. Malaria—In malaria the leucocyte count is usually low except just before the chill, when it rises and may present a true leucocytosis. After the paroxysm the lymphocytes are increased, especially the large lymphocytes. Some consider the increase in large mononuclear cells, the so-called endothelial cells, as diagnostic of malaria.

"The increase of the large mononuclears (endothelial cells) is very pronounced in the apyretic periods and usually absent in the pyretic periods. * * * The high percentage of these cells is very valuable in the diagnosis of cases which have been taking quinine and therefore have no parasites in the peripheral blood. * * * Such cells are almost as valuable in diagnosis as is the parasite itself."—(Emerson.)

3. Whooping Cough—"In whooping cough the leucocytes, especially the lymphocytes, are much increased the counts averaging 40,000. This leucocytosis is more pronounced the younger the child is. Its early appearance makes it of great value in diagnosis. It begins during the catarrhal stage and, continuing through the paroxysmal stage, reaches its maximum during convalescence." (Emerson.)

This quotation is given as it coincides so closely with actual experience in this laboratory. It seems surprising that this aid in diagnosis is not used more generally, especially in doubtful cases.

Three recent counts are given here.

A. K., age 1½ yrs. Leucocytes—61,300. Lymphocytes—55 per cent.

C. B., age 7 yrs. Leucocytes—32,100. Lymphocytes—38 per cent.

L. B., age 10 yrs. Leucocytes—10,300. Lymphocytes—47 per cent.

4. Leukemia—In both chronic and acute lymphatic leukemia there is always a very high lymphocyte count. The lymphocytes make up 70-90 per cent of the total leucocytes. This is the only condition in which

it may be truly said that a differential count is diagnostic.

5. Influenza—In true influenza there is always a low white count with an increase in the lymphocytes. The leucocyte count may be as low as 2,500 with 40-60 per cent lymphocytes. In this disease a differential diagnosis from typhoid fever can not be made on a differential count alone.

THERAPEUTICS

FREDERICK R. TAYLOR, B.S., M.D., *Editor*
High Point

THE PREVENTION AND TREATMENT OF INFLUENZA

This time of year that protean infection variously known as influenza, gripe, deep cold, etc., attracts the attention of all of us, and it is worth while to stop for a moment and take account of stock, as it were, to see what are our resources in combatting this disease or group of diseases.

In the first place, we shall have to attempt a "circumscription of the topic," as Prof. William James puts it, by trying to define what we mean by influenza. This is not an easy task. The books describe it as an acute infection, tending to exhibit one of three main types, with many mixed types. The three main types are respiratory, gastrointestinal, and nervous. The respiratory type tends to develop such conditions as tracheo-bronchitis, broncho-pneumonia, sore throats of various kinds, sinus infections, and otitis media. The gastro-intestinal type is characterized by marked nausea and vomiting, anorexia, shifting cramp-like abdominal pain with or without diarrhea. The nervous type is likely to develop a higher fever than are the other types, unless a broncho-pneumonia or other serious complication be present, and is characterized by severe general aching, mental depression, and sometimes delirium. As a matter of fact, most cases are of mixed type, though with a preponderance of symptoms along one of the three directions outlined. By far the most characteristic symptom of influenza is *prostration out of all proportion to the other symptoms*. This is the mark of the beast that differentiates it from a simple tonsillitis, bronchitis, gastro-enteritis, etc. We might go on and ask the question,

"When is 'influenza' not influenza;" and reply, "When it is smallpox in the pre-eruptive stage, dengue, encephalitis, or something else." However, we do not wish at this time to go into the problems of differential diagnosis, but simply to discuss the prophylaxis and treatment of the disease.

Prophylaxis.—If we happen to be in a pessimistic mood, and especially if we happen to be passing through our sixth attack of the disease, as happened to the writer a few weeks ago, we shall probably dismiss the prophylaxis of influenza with the simple slogan, "There ain't no such animal." Like most pessimistic viewpoints, however, this involves a distorted half-untrue attitude. No doubt many cases of endemic and epidemic influenza, and most cases of pandemic influenza, are absolutely unpreventable, yet we do believe that some cases may be prevented by avoiding the chief predisposing causes of the disease. These are chilling, getting and keeping wet, exhaustion, and errors in diet. Keeping warm and dry, getting plenty of rest, eating and drinking wisely, and keeping oneself physically fit, will, we believe, prevent many a case of influenza. When a case occurs in a family, ordinary care regarding such matters as separate towels, bedrooms, etc., is naturally to be taken. It has always been a matter for speculation and amusement to us to see how careless people are in dealing with influenza, a highly transmissible disease against which we have no specific prophylaxis, yet let a case of smallpox break out in the same community, and a near-panic arises; though smallpox is a disease against which we have an almost perfect specific protection. We have little faith in certain special efforts at prophylaxis such as the wearing of masks. We have not seen any real benefit from vaccine. We believe that influenza is due to an unidentified ultramicroscopic filtrable virus, hence on theoretical as well as practical grounds we cannot expect much benefit from an ordinary bacterial vaccine. Perhaps a vaccine may tend to prevent certain suppurative complications, but we cannot believe that it exerts any influence in combatting the original disease.

Treatment.—This will vary somewhat with the type. The gastro-intestinal type is the most difficult to treat, because it often prevents, by persistent vomiting, effective oral

medication. Here, until the stomach is quiet, codein hypodermically is probably our best remedy. Frequent simple enemas will do much to relieve gas pains, which are often very distressing, especially in cases without diarrhea. A hot water bottle to the abdomen is usually serviceable. A full hot bath is of value. Rest in bed is, of course, indispensable for all types, but the prostrating effects of the disease usually enforce this from the start, so that advice to that effect is quite superfluous.

For all types in which nausea and vomiting are slight or absent, we like to begin treatment with a fairly heavy ensemble of therapeutic procedures. These include a brisk purge, preferably with a tasteless preparation of castor oil; a small dose—5 grains—of Dover's powder, to be repeated in two hours unless the patient is asleep (we prefer two small doses to one large one, as there is less risk of vomiting); a full bath as hot as can be borne, prolonged enough to start free sweating, though not long enough to cause faintness from vasodilatation; and copious hot liquids—hot lemonade, soup, cocoa, etc. We do not, however, endorse a treatment described some years ago by a beloved ancient medical friend and counselor, which consisted in putting the patient to bed, hanging his hat on the bedpost, and giving him hot toddy to drink until there were two hats on the bedpost! We might add that our ancient friend, who has since gone into the Great Beyond, did not endorse it either, but merely described it for its historic interest.

After this initial onslaught, the further treatment of the case will depend on the conditions requiring relief. For the violent cough which so often harasses the patient with tracheo-bronchitis, we know of nothing better than the following prescription:

Rx. Codein sulphate (or phosphate)	8 grains
Sodium (or potassium) citrate	½ ounce
Syrup of hydriodic acid.....	3 ounces
Water, enough to make.....	4 ounces

Mix, and label one teaspoonful in water every 3 hours till cough is relieved.

The water is added in order to dissolve the citrate, which is not very freely soluble in the pure syrup of hydriodic acid.

In addition, we often employ steam in-

halations medicated as follows:

Rx Menthol	15 grains
Paregoric	3 drams
Compound tincture of ben- zoïn to make	3 ounces

Mix. Label one teaspoonful in a pitcher of hot water and inhale steam as directed every 3 or 4 hours.

The patient is *shown* how to use the above, wrapping a towel around the pitcher to protect his hands and make a mask for his face. The difficulty of cleaning the gum that is precipitated in the pitcher is also mentioned, and often the suggestion is made that an old pitcher, perhaps with a broken handle, be used, so that it can be discarded when no longer needed. Note that this formula for medicating steam contains no eucalyptus. We find that it often irritates the trachea. Often we suggest simple menthol candy lozenges. They cure nothing, but they do often give relief to an irritated throat. External applications often prove gratifying, and among these we know of nothing better than methyl salicylate rubbed into the neck and chest.

For the aching so prominent in the nervous type of influenza, we find the following prescription worth while:

Rx Codein phosphate	2 grains
Phenacetin	12 grains
Aspirin	15 grains

Mix and put into 6 capsules. Label, one every 3 or 4 hours till relieved.

Occasionally salicylates alone in larger doses are useful, such as simple aspirin, 10 grains every 4 hours, or the elegant effervescent tablets of sodium calicylate, 10 grains each—one tablet taken dissolved in a glass of water every 4 hours.

Right here let us consider for a moment the idea held by many laymen and some physicians that aspirin injures the heart. We do not know of a single case where this has been shown to be true. It is impossible to damage the heart of a dog with aspirin by mouth—he will vomit it before any effect is produced upon his heart. Dr. Homer F. Swift, of the Rockefeller Institute, has given as much as 200 grains of aspirin in 24 hours to a patient without harm. The fiction has probably arisen from the fact that the largest doses of aspirin, or other salicylates, are indicated in rheumatic fever, one of the most

destructive diseases to the heart that is known. The *disease* injures the heart, but the ubiquitous *post hoc* error gives rise to the belief that the drug was responsible. There are, however, a few people with a definite idiosyncrasy to aspirin, who, when they take even a small dose, suffer from either severe gastro-intestinal irritation, or a skin eruption. We know of one patient who was three times diagnosed as having scarlet fever. His only trouble was that he had taken a 5 grain aspirin tablet for a slight cold each time, but he had a typical scarlatiniform eruption. Curiously enough, he later lost his idiosyncrasy, and can now take aspirin with impunity, as can a young woman who suffered from uncontrollable vomiting for about 24 hours following the first dose of aspirin she ever took, which she ascribed to the effect of the drug, and for which we could find no other cause.

For the severe backache, which is so often a prominent symptom of influenza, alcohol rubs and "baking" with a simple heat-producing therapeutic lamp are helpful. Diathermy when available can also give marked relief. Enthusiastic claims are being made for infra-red radiation in relieving pain. We believe that it can and does relieve pain, but we do not know the difference between infra-red and ordinary heat rays, or whether there is any difference. Certainly heat rays are infra-red in one sense; i. e., they have a longer wave length than do the red rays of the spectrum.

Convalescence from influenza is characteristically slow. The perception of the flavor of food is often markedly affected—patients complain that "everything tastes like putty." In such cases, some rather strongly flavored soup that is also thick and nourishing, such as mock turtle or ox-tail, is often relished by the patient sooner than less highly seasoned foods. Of course highly seasoned foods will be avoided when a nephritis is present, but in our experience, influenzal nephritis is a distinctly rare disease, whereas nephritis due to tonsillitis is quite common. Convalescent patients usually want a "tonic." Probably no tonic is much better than Osler's famous "hope and nux vomica." Sometimes we use a soluble pill or capsule containing iron, arsenic, and strychnin. When needed, some artificial digestant such as caroid may be

helpful. Time is probably more valuable here than any drug, and more of it is likely to be required after influenza than after most other acute infections, to permit of the full development of the *vis medicatrix naturae*—indeed, we know of no more fitting way to close this discussion than to give the Irishman's definition of influenza, which for its epigrammatic sententiousness surpasses any denition of the disease ever given by a Professor of Medicine. The Irishman defined influenza as "the disease that makes you sick six weeks after you get well."

INTERNAL MEDICINE

PAUL H. KINGER, A.B., M.D., *Editor*
Asheville

THE ETIOLOGY AND PATHOLOGY OF ARTHRITIS

As a corollary to the abstract of Cecil and Archer's paper on the classification and treatment of arthritis, it has seemed opportune to the editor to consider somewhat carefully an excellent paper by Ralph Pemberton appearing in the Journal A. M. A. for October 16, 1926, on the Etiology and Pathology of Arthritis. The papers of Cecil and Archer and of Pemberton taken together, cover in most of its phases the important and by no means fully understood problem of arthritis.

There is a temptation to regard the phenomena of arthritis as due solely to the local depredations of microorganisms, especially streptococci, in situ. Proof to this end, however, is far from complete and other influences must be considered in both the development and the subsidence of the disease. Arthritis cannot be studied from a fixed external point of view.

Arthritis is, after all, only an expression in the joints of the underlying rheumatoid state operative in many tissues of the body. There is essentially a disturbance of physiological function.

Studies of cases of arthritis in the army during the world war revealed a slightly lowered basal metabolism rate in 20 per cent of the cases, and in 60 per cent of the cases a delayed removal of glucose from the blood after introduction by mouth. Removal of the causative infection, or recovery from arthritis,

(or both), is accompanied by a return to normal in the elimination of glucose from the blood. This abnormality in the behavior of the glucose content of the blood has nothing to do with any diabetic condition, as this was definitely excluded in all cases.

Pemberton had previously advanced the hypothesis that the phenomena of arthritis bear some relation to the blood-flow of the part in question. Studies were undertaken of the blood gases in arthritis and also of blood gases during the performance of the test revealing a lowered sugar tolerance. To briefly state the results, it was found that during a test revealing a lowered sugar tolerance, the blood which contains a large amount of the inadequately removed sugar contains also a higher percentage saturation of oxygen than it did immediately before the test. The conception then arose that the rise in oxygen during the feeding experiment revealing lower sugar tolerance and hence an accumulation of sugar in the blood, was due to the failure of the blood adequately to reach all the tissues of the body, thus leaving certain components of the blood unutilized.

This hypothesis was tested by interfering with the circulation in three of the four limbs while doing the sugar tolerance test. Arthritic and normal individuals found to have normal sugar tolerance in the dorsal decubitus, were placed with two legs and one arm sharply elevated at right angles to the body. It was shown that in 57 per cent of the arthritis patients studied, a lowered sugar tolerance could be artificially induced.

In view of the close parallelism between focal infections, arthritis, and a delayed removal of sugar, this is strong evidence that at least part of the pathological change in the rheumatoid syndrome consists in an interference with or obstruction to the blood-flow, presumably in the finer capillary beds. This evidence is further borne out by clinical experience of the value of massage and heat: two of the most valuable aids to treatment of arthritis.

Studies were also made on the effect of exercise, heat and massage on the human body from the standpoint of physiological chemistry. As a result it was found that:

Exercise produces systemic acidosis.

Heat produces systemic alkalosis.

Massage produces neither, but has a defi-

nite influence on the blood-flow through the capillary beds, and causes an increase in the red cell count. Of these three valuable therapeutic measures the chief "common denominator" operative for good is their influence on the circulation.

Studies on the Red Blood Corpuscles:

The first drop drawn in normals gives a higher cell count than does the fourth or fifth drop. In arthritis the reverse is the case, and the first drop gives a lower count. To eliminate errors in the count, photo-micrographs were made of various fields in the counting chamber so that counts could be checked up and, furthermore, so that a permanent record could be filed for comparison with future studies. It was found that in 70 per cent of arthritic patients as opposed to 40 per cent of normals, there was a lower cell count in the first drop. This blood is not arterial and comes from capillary beds. Evidently then, in arthritis there is paucity of cells in the blood at the periphery. Absorption of bone, at least in the atrophic and proliferative types of arthritis, depends in part upon interference with the local blood supply.

One can state with reasonable confidence by way of summary, that arthritis and the rheumatoid syndrome depend for their local pathological manifestations, in part at least, on a disturbance of the finer blood supply of the tissues, probably in the capillaries, such that the local metabolic processes are interfered with. A secondary disturbance of the acid-base equilibrium, at these local sites only, probably plays an important part in the removal and disposition of bony tissue, although operative in other tissues equally. The familiar symptoms of fatigue, local weakness, headache, etc., shown by the patient with arthritis, are recognized consequences of anoxemia, as is well illustrated among aviators. Correlation of this conclusion with the beneficial influences of rest, massage, heat, exercises and such agents of metabolic influence as arsenic, constitutes a fairly complete picture.

It is well known that cartilage is avascular and that it derives its nutrition from the synovial fluid. It has often been wondered how this came about. It was found that in the performance of the glucose tolerance test, the synovial fluid received the sugar ingested

by mouth with such rapidity as often to exceed the amount of sugar found in the blood. Since synovial fluid can receive sugar, it can also receive other soluble substances including toxic materials or normal materials in excessive amounts. Their influence on joint structure must be considered.

This paper impresses the editor with its breadth of knowledge and its depth of thought. It represents, in his opinion, the highest type of research: that type which seeks through all the ramifications of science to solve the problem it has set itself, and yet ever keeps in the forefront the ultimate goal of all medical investigation; the better understanding of disease and consequently its more perfect management and more frequent cure. So many research workers nowadays become trapped in the realm of pure science and lose the beacon-light toward which they started. This, Dr. Pemberton has not done. He has "kept the faith" and has given a paper which will well repay repeated reading. It is work such as this that brings to the fore the close relationship between the chemical and clinical laboratory and careful observation at the bedside: a relationship which cannot be too greatly stressed and "whose truth endureth from generation to generation."

EAR, EYE, NOSE AND THROAT

THE MATHESON GROUP, Editors
For this issue H. L. SLOAN, A. B., M.D.
Charlotte

OCULAR HEADACHES

Headache is a subject of peculiar interest to every physician. De Schweinitz says that eye-strain is the cause, wholly or in part, of 60 per cent of functional headaches; other authorities place the percentage even higher. Someone has divided society into two groups. The first group includes those who are employed in out-of-door occupations. The second group includes those who work indoors, such as clerks, professional people, etc. One to twenty per cent of the first group (about 40 per cent of the population) have symptoms of eye-strain; in the second group (about 20 per cent of the population), about 80 per cent have symptoms of ocular disease and eye-strain.

Many more people now-a-days wear glasses for one reason or another, and therefore some think the race is deteriorating. The real reason is that much more is required of our eyes than was true in the time of our ancestors. Primitive and civilized people have the same ocular defects, but the latter have much more work for their eyes to do, and therefore suffer of this fact someone has said with good reason to a greater extent from eye-strain. Apropos that "the percentage of people wearing glasses in a community, or group of society, is an index to the education and scholastic attainments of that group or society."

But we were discussing more particularly ocular headaches. Can it be said that an ocular headache has such distinctive ear-marks as to enable one to say with certainty that a given one is due to eye-strain? I'm sure that it is generally agreed among the leading oculists that such is not the case. Certainly ocular headache has certain features that are suggestive. It may be mild or severe, and often is located in the forehead and back of the eyes, in the temples and frequently in the occiput. Moreover, it very often comes on just before noon or about four in the afternoon, after a day's work at the desk, and grows more intense as the day wears on. It will pass off after a short sleep and the headache is gone in the morning. Then, too, the headache may come on after viewing a cinema, after a shopping tour, or after driving an automobile.

However, this is not always the case. The headache may be located in any portion of the cranium. Eye-strain may be the cause of a headache that comes on long after cessation of eye work. The headache may come on in the morning after use of the eyes the night before. Morning headaches are more often due to nasal accessory sinus disease, to cerebral arterio-sclerosis, to acute alcoholic poison, to renal disease; and yet not infrequently morning headaches are caused by eye-strain and relieved by suitable lenses.

An error of refraction may be present for twenty to thirty years and cause no headache, until its possessor is called upon to do some very exacting or prolonged eye work, or until he is weakened by some disease. Quite frequently we find eye headaches coming on in children after one of the exanthemata, or an attack of mumps or pertussis. Most of

them show up when school work becomes exacting. And it should be borne in mind that good vision and a robust physique are not incompatible with ocular headaches. Quite frequently a small error of hyperopic astigmatism, or hypermetropia, will cause an excruciating cephalalgia in the most robust; the fact that he possesses strong musculature presupposes greater power, effort and exertion to overcome the defect and as a consequence greater spasm and excruciating pain. Perfect vision is not inconsistent with ocular headaches.

Just as you cannot say this is a typical "gastro-intestinal headache," or a "renal headache," etc., so the oculist cannot say a given headache is a typical ocular headache. I'm convinced of this fact, however, that a careful examination of the eyes should disclose whether or not a patient has an ocular cause for his headache. As eye-strain is the most frequent cause for chronic headaches, I think it is fair to say that every headache that does not yield to treatment after a reasonable time, calls for a careful ophthalmic examination.

As S. Weir Mitchell used to say, a person may have two or three kinds of headaches, and relief of eye-strain may be an important part of the treatment.

In conclusion, let me quote Dr. de Schweinitz, who in turn quotes S. Weir Mitchell:

"With full recognition and admiration of the work of Donders, Graefe and the earlier writers, it is a matter of congratulation that the widespread influence of eye-strain was first recognized by American physicians, and our real knowledge of this matter is due to the genius of Weir Mitchell and the labors of William Thomson and Ezra Dyer. It constitutes a discovery, or at least, a realization which insofar as the relief of human suffering and the sum of human happiness are concerned, deserves to rank with the best scientific announcements of the nineteenth century. Listen to the proclamation of more than fifty years ago:

'What I desire, therefore,' wrote Weir Michell in 1872, 'to make clear to the profession at large is: (1) that there are many headaches which are due to the disorders of the refractive or accommodative apparatus of the eyes; (2) that in these instances the brain symptom is often a most prominent and

sometimes the sole prominent symptom of the eye troubles, so that while there may be no pain or sense of fatigue in the eye, the strain with which it is used may be interpreted solely by occipital and frontal headaches: (3) that the long continuance of eye troubles may be the unsuspected source of insomnia, vertigo, nausea and general failure of health; (4) that in many cases the eye trouble becomes suddenly mischievous owing to some failure of the general health, or to the increased sensitiveness of the brain from moral or mental cause.' We have elaborated our methods, improved our instruments of precision and extended the list of interpretations of eye-strain, but otherwise we have been able to add but little to this complete and compact presentation of the facts of the case.'

REFERENCES

- (1) de Schweinitz, Geo. E.: Ocular Headaches, N. Y. Academy of Medicine Bulletin. Second Series, Vol. I, No. IV, p.p. 140-149.
- (2) Lancaster, Walter B.: Headaches—Ophthalmologic Aspects. *Annals—Otology, Rhinology and Laryngology*, Sept., 1925.

DERMATOLOGY

JOSEPH A. ELLIOTT, M.D., *Editor*
Charlotte

PITYRIASIS ROSEA

The writer has recently seen several cases of pityriasis rosea which had been diagnosed secondary syphilis. One of these patients was discharged from a government hospital because he refused to take arsphenamine while it was known that he had a severe pyelonephritis. A diagnosis of syphilis was adhered to in this case in spite of the fact that the patient had a typical pityriasis rosea eruption, no evidence of a primary sore and a negative Wassermann. Due to the fact that such errors in diagnosis are frequently made, a brief discussion of the characteristics of pityriasis rosea seems appropos.

Symptoms—Occasionally the disease begins with a slight febrile disturbance but as a rule the constitutional symptoms are very mild or entirely absent. In a large percentage of the cases the eruption appears as a single lesion, about the size of a dollar, known as the primitive plaque, which is usually located on the trunk. Within a few days to

a week this is followed by a general eruption over the trunk and thighs. Rarely lesions may be seen on the face, but as a rule they do not extend above the shoulders or below the knees. The lesions are pinkish or rose colored oval macules and maculo-papules, varying in size from a pin head in the early lesions, to that of a half dollar in the well developed lesions. The long axis of the oval lesions correspond to the lines of cleavage. The scales are furfuraceous, and due to their cigarette paper appearance, they are frequently described as cigarette-like scales. In many cases there is a mild enlargement of the lymph glands. Subjective symptoms are usually absent, but occasionally mild to moderately severe itching is present.

The disease is self limited, lasting from four to six weeks. A few cases have been recorded that persisted from four to six months.

Etiology—The etiology of the disease is unknown, but many believe it to be due to a low grade infection. The character of onset, the self limitation, the glandular enlargement, the rarity of recurrence, and the mild epidemics seem to point to an infectious origin.

Diagnosis—The diagnosis can be made clinically on the distribution of the eruption, the superficiality of the lesions, their oval contour, peculiar coloration, character of scale, the occasional presence of a primary plaque, and the history of a sudden onset with a rapid extension of the lesions over the body.

Treatment—The disease being self limited, usually disappears without treatment in six to eight weeks. This time may be greatly shortened, however, by applying mild erythema doses of ultra-violet light and the application of a soothing lotion, such as the calamine lotion. The alpine light seems to have a specific effect in this disease and should be used especially in those cases where subjective symptoms are present.

RADIOLOGY

JOHN D. MACRAE, M.D., *Editor*
Asheville

OSTEOMYELITIS

This is a condition most usefully studied

with x-rays. Good films determine the extent and character of the process but the physician who waits for an x-ray diagnosis does so at great cost to his patient.

Clinical diagnosis of osteomyelitis is possible in the majority of cases before x-ray evidence is obtainable. It is based on: pain of very severe character which develops suddenly and is localized as a rule in the shaft of a long bone near an epiphysis; generally there is edema over the region, and toxemia, as evidenced by chill, high temperature and other constitutional manifestations.

Keene says that 50 per cent of all cases occur in the period between the thirteenth and seventeenth years, but the disease is occasionally seen in the very old and in the very young. It is three times more frequent in boys than in girls. Its occurrence at the time when bones are not fully developed places this particular age period as an important predisposing factor. Lowered resistance from cold, fatigue and disease are important, also it is frequently secondary to pyogenic infection in some distant part of the body. The primary focus may be in the bone marrow itself.

Pyogenic bacteria are always present in osteomyelitis. Mixed infections take place where the lesion is advanced and sinuses have developed. Syphilitic, tuberculous and typhoid infections as well as several others are sometimes responsible.

The above mentioned symptoms are very definite in osteomyelitis before bone necrosis can be demonstrated by x-rays, except in syphilitic osteomyelitis where pain may be very slight, therefore the common rule of applying drainage to all collections of pus must be practiced immediately on their recognition.

A pus infection in the medullary cavity of a long bone may extend from end to end of the canal and through Haversian canals penetrate the cortex and elevate the periosteum with subperiosteal accumulations of pus before x-ray changes are in evidence, therefore the surgeon in his attack on an osteomyelitic bone must be guided by the localized pain and swelling (swelling may not be recognized at first), and he must be prompt or the extension will be great before surgical aid is applied.

What has been said tends to show that

x-rays may be dispensed with, but this is not true, for there is no other way to determine the extent, progress and intensity of bone infection and destruction.

The character of the bone changes will depend on the evidence of the infection and length of time which it has existed.

The first x-ray evidences of osteomyelitis may be seen within three or four days, but ten or more days may go by after onset of symptoms before x-ray changes can be demonstrated.

Two things are to be sought in films of osteomyelitic bones: Bone destruction and bone production. While there is no constant picture of osteomyelitis, these characteristics considered in connection with symptoms and history will direct us to a diagnosis.

In the early stages bone destruction predominates. The disease, while limited to the medullary canal, spreads in the soft marrow without our being able to see it in the films, then infection extends in the Haversian canals to penetrate the cortex producing irregularly placed areas of necrosis which show as spots of low density in the films. A little later pus accumulates under the periosteum and elevates it thus producing a change which we can demonstrate.

As the disease progresses nature begins to lay down new bone in her effort to conserve, and bone production and destruction exist together.

Drainage becomes established. Bone which has been deprived of circulation by elevation of periosteum and endosteum dies and is slowly separated from healthy bone to form sequestra. While this goes on new bone is laid down about the dead bone and forming of the involucrum is begun.

In tuberculous bone infections very little new bone is seen, while in syphilitic osteomyelitis the production of new bone is excessive and pain may be very slight. Malignancy of bone destroys it in mass while in osteomyelitis there are many areas of destruction separated by healthy bone producing a honeycombed appearance of the lesion.

Since the treatment of osteomyelitis seeks to establish drainage at the earliest possible moment the x-ray made at the onset of the disease is of little use, but as the disease becomes chronic and further operations—to maintain drainage and later to remove se-

questra—must be done, serial x-ray studies become invaluable.

GYNECOLOGY AND OBSTETRICS

ROBT. E. SEIBELS, M.D., *Editor*
Columbia

BREECH DELIVERIES

One of the serious difficulties of obstetric practice is the management of the head in breech deliveries—whether it be a primary breech presentation or the result of a version. Primiparity is seldom associated with an easy delivery of the after-coming head and multiparity occasionally makes the problem apparently no less easy. When one remembers the great difficulties with which he has extracted the head, he is inclined to approach the problem with some trepidation. There are certain factors which contribute toward success and obviate some of the dangers.

The patient should be on a table, and the usual pine kitchen table is very satisfactory; a good light is required; the patient should be anesthetized—preferably with ether, as the operation may be prolonged. The bowels should have been emptied with an enema an hour previous to the delivery to prevent contamination of the field. The bladder should always be emptied by a catheter in order to prevent damage to it. The vulva should be shaved and scrubbed clean. The use of stirrups to hold the feet or tying the legs up in extreme lithotomy position is a disadvantage, as it raises the perineum, distorts the pelvic curve and in a primipara subtracts much valuable room at the outlet. If assistants are not available, the feet should rest on chairs, so that the thighs are on a level with the body.

Under anesthesia, the perineum should be slowly and carefully stretched and ironed out, first with two fingers, well lubricated, then three, then four, until finally the closed fist may be easily passed in and out of the vagina. This step is of first importance, as it gives extra room so necessary later on and the dilated muscles stretch more easily and are less inclined to serious laceration. Before version is attempted or the breech presentation delivered, the cervix should be completely dilated, so that the closed fist may

easily pass through it; the necessity for this is obvious.

Having delivered the infant's thighs and hips and brought down a loop of the cord to prevent compression, the obstetrician should desist from any further traction. The patient is allowed to come out of anesthesia sufficiently to assist, the uterus is massaged gently with the hand on the abdomen—to assist the pains and the attempt made simply to assist at the rest of the delivery, rather than deliver the baby by prolonged traction.

Pulling the feet tends to bring about three disastrous events: Extension of the arms alongside the head or pulling the occiput down against the arm in a nuchal hitch, extension instead of flexion of the head, and finally, by having the chest wall pretty well fixed and pulling on the lower half of the body, the diaphragm is pulled down and fluid is mechanically drawn into the lungs by the suction action.

It has been taught that babies begin to breathe from the stimulation of the skin by the outside air and temperature—hence the obstetrician must deliver the mouth three minutes after the navel. We now know that the first inspiration is due to stimulation of the respiratory center by the carbon dioxide in the blood and as long as the circulation in the cord is adequate, the carbon dioxide content will not rise. Hence, there is no need for haste in delivery and possible complications may be its result. Potter states that he has waited as long as thirty minutes between the birth of the navel and of the mouth, with no evil affects.

The body is delivered by pressure from above aiding the uterine contractions, until a scapula appears, and then by gentle rotation a shoulder is made to present and the finger slips along the anterior arm to the elbow, which is flexed, and the baby's face "wiped" by it; again the body is rotated and the other shoulder is brought anterior and the procedure gone through with.

If there has been no undue traction and flexion has been maintained by pressure of the hand on the abdomen, the baby's chin should be engaged in the right or left fossa in the inlet. Here again modern teaching departs from the old. Instead of throwing the baby's body up on the mother's abdomen¹—thereby hyperextending the neck and

often fracturing the cervical vertebrae—the most common cause of “asphyxia neonatorum”—the body is lifted up until the perineum is visible and supported on the arm while the other hand depresses the head down into the pelvis. When the chin reaches the outlet, the body is lifted straight up and may be held by an assistant while the operator may depress the perineum either with his hand, a Sims’s speculum, or a bent spoon. The trachea is gently stroked downward and often the baby begins to breathe while still undelivered. A piece of gauze to wipe out the secretions as they appear, permit the infant to breathe with greater freedom.

The rest of the delivery may be accomplished with the patient asleep, or awake, as the operator sees fit. The head is delivered by flexion, the chin, face and brow being slowly pushed over the perineum as it dilates, by the hand from above. At no time is traction made on the shoulders for fear of brachial palsy.

¹Potter—*The Place of Version in Obstetrics*, St. Louis, 1921.

ORTHOPEDIC SURGERY

O. L. MILLER, M.D., *Editor*
Charlotte

HIP JOINT TUBERCULOSIS

It is most interesting today to observe the play of opinions among orthopedic men here and there in regard to the management of tuberculous joints. It is evident that we are passing through a phase of uncertainty and change in regard to this lesion. The old teaching of absolutely immobilizing the diseased parts and almost the entire individual over a long period of time, is decidedly passing off the stage.

In a recent issue of the *Journal of Bone and Joint Surgery*, Dr. L. D. Smith, of Milwaukee, outlines the present method of handling hip joint tuberculosis at the Massachusetts Hospital at Canton, Massachusetts. This is an old, well recognized institution, having a long experience with this disease.

“The regime at Canton maintains the vitality of the patient at the highest possible level. To this end the treatment is constitutional rather than local. The diseased hip is pro-

tected from weight-bearing but not from motion with a Bradford abduction traction splint. General freedom of activity is encouraged as soon as the symptoms of acute spasm and pain subside.

The condition of the diseased hip corresponds very closely to the general condition.

In all cases where ankylosis is now present or expected the disease was well advanced and destruction was marked before admission to Canton.

In all cases progress of the disease was promptly arrested when placed under this regime.

The results attest the importance and the virtue of a nice balance of all hygienic measures without stressing any particular agent. It seems to prove that the therapy of the sun is potent at our latitudes, under conditions where its ultra-violet rays are usually weakest; i. e., at low altitude, inland from the seashore.

Twenty-two per cent of all the cases have come through with articular surfaces likely to be useful as true joint surfaces. Findings at Canton seem to indicate that this proportion would be markedly larger should the patient be placed under this regime at the incipency of the joint lesion. We have no proof that these were tuberculous lesions of the joint but the clinical signs and symptoms had led to this diagnosis.

Atrophy seems proportional to degree of disuse and not to virulence of the disease.

The relation of posture to structural scoliosis does not appear to be intimate. All but those retaining functional joints present a marked and some an extreme compensatory scoliosis and lordosis. In none of these cases has any appreciable structural change taken place in the spine.

The increased effective length of an abducted thigh is without advantage in view of the lurching, ungraceful gait incidental to it and abduction is to be avoided.”

UROLOGY

HAMILTON W. MCKAY, M.D., *Editor*
Charlotte

RUPTURE OF THE URETHRA

In considering injuries to the urethra, it is

well to realize we are dealing with a hollow tube, a portion of which is fixed and in close opposition to the pelvic arch. It is in this fixed portion of the urethra that we are more apt to have direct violence with serious consequences. Such violence may be in the form of a fall astride some object as a cross bar, or a sudden jamming of the fixed portion of the urethra against some hard object, as, for example, the pommel of a saddle. The urethra being suddenly forced against some portion of the bony pelvis, such an injury may, and often does, cause rupture. This form of urethral injury is caused by external violence and is, in reality, a partial or complete fracture of the hollow tube. The other form of urethral injury is from within and is usually a result of unskillful or unwise use of instruments. *We who daily use instruments in the urethra are responsible for entirely too much trauma or injury.* It is exceedingly easy to traumatize the greatly congested or hypersensitive and distorted urethra. The results of such injury may be stricture, false passage or rupture. We must remember, the movable or penile part of the tube is rarely injured in the flacid state. If injury takes place in this portion of the urethra it is generally during erection. The bulb is subject to direct violence and is very apt to rupture. Rupture of the posterior urethra is generally due to some crushing injury, as, for example, fracture of the pelvis. Rupture of the urethra is a common result of any of the forms of trauma given above, and Lowsley emphasizes the well known fact that injuries to the urethra seldom receive proper treatment, if the patient is a child. Thompson says "the diagnosis of a ruptured urethra must not rest upon the hope that nothing serious has happened. The history of the accident which can usually be supplied quite adequately by the patient, should point to the correct diagnosis, and it is never safe, with a history of a fall upon the perineum, to neglect the probability of a rupture of the urethra."

An examination of the site of the injury may be comforting, but is often very deceptive. Usually the skin and soft tissues are not cut or torn and the injury gives the appearance of a simple bruise. If the rupture is in the posterior urethra it is usually complete; if in the bulb, it may be a complete

severing of the entire tube or the roof of the urethra may be speared. If the injury is in the pendulous urethra it is generally a contusion.

Pain and bleeding from the urethra and difficulty with the urinary act are the outstanding and most important symptoms to be considered at the time of injury. A tumor with local tenderness may soon follow, accompanied by pain in the region of the bladder and inability to empty, such a group of symptoms complete the picture of a ruptured urethra. In arriving at a diagnosis, however, the type of injury must always be kept in mind, and such a history, coupled with great difficulty in micturition and subsequent extravasation of urine into the tissues, the diagnosis is evident.

No attempt to catheterize or pass any kind of instrument into the urethra to confirm the diagnosis should be attempted. Passage of such an instrument cannot give such valuable information as to "take the chance" of serious injury to the already traumatized tissue. If a small bridge of epithelial lining is left, even the tip of a small soft rubber catheter is enough to not only carry infection into the devitalized area, but the actual manipulation may sever the rest of the epithelial bridge and thus, in the end, cause more stricture. External urethrotomy is indicated and the blood clots should be cleaned out of the field of operation and the ends of the severed urethra sought for. The distal end can be found by passing an instrument from without inward into the field of operation; the proximal end is often more difficult to find. Sometimes a leak of urine into the field of operation will act as a guide to help the operator to find the bladder end of the urethra. Should great difficulty be found in finding the proximal end, suprapubic cystotomy with retrograde catheterization is possibly the easiest way to find the proximal end, as well as being the best operative procedure. A soft rubber catheter should be introduced and the two ends of the urethra sutured around this catheter, as good apposition of the two ends being obtained as is possible. Some operators claim that diverting the course of the urine by suprapubic cystotomy and good apposition of the ruptured end of the urethra around the catheter, is by far the best way of preventing a large

fibrous area and troublesome stricture.

Guyon's classification is convenient, as it offers the best indications for treatment, according to Keys.

(1) Mild injuries to the pendulous urethra. No serious consequences, possibly traumatic stricture.

(2) Moderately severe injuries to the pendulous urethra. These are characterized by pain, free bleeding, dysuria, hematoma, infiltration; suppuration and stricture are usually the results.

(3) Severe injuries. In most perineal cases, complete retention is the result; cystotomy and external urethrotomy are indicated.

The chief aim and object of any outlined treatment should be: first, to prevent extravasation of urine into the tissues and; second, to cause as little scar formation as possible in the urethra, in order to prevent the troublesome and resistant forms of stricture which follow.

OBITUARY

Memorial to Dr. H. S. Belt*

By

John A. Owen, M.D.
Turbeville, Va.

It is eminently fitting and proper at this time that we pause in our discussion of the alleviation of human suffering and the prolongation of life and the cure of disease to pay a tribute to one who only yesterday, it seems, was one of us, but has joined that innumerable caravan that has passed over the river.

This is especially a suitable occasion for this tribute, because he was one of the charter members of this society, one of its early presidents, and prepared papers and joined in discussions freely on its floor; and whenever we have met here, his home and hospital were open to our guests, and many of you have partaken of his hospitality and enjoyed his genial presence.

Humphrey Singleton Belt, the fourth of his

line to bear this name, was born 58 years ago in Pittsylvania County, the son of a country doctor, and spent his early years on the farm. When as a boy, listening devotedly to his father's wisdom and medical lore, who knows as he watched him swing his saddle bags over his shoulder and ride into the night, but that the romance of medicine even then gripped him and pointed him to his chosen career? After his father's death and an unusually disastrous crop, he turned to medicine and entered the University of Virginia. Here he made some warm and lasting friendships, such as that of Dr. Stuart McGuire and others, that held on through the years. One year later, he entered the University of Maryland and graduated in one year. Coming back to his native county, he located in Chatham with Dr. Rawley W. Martin and there was formed a friendship that lasted to the end and many times were Dr. Martin's maxims and wisdom quoted by him. After three years, they separated, Dr. Martin moving to Lynchburg, earning the title of the most beloved man in Lynchburg, and Dr. Belt coming to South Boston, to begin again the general practice of medicine. Even in these early years, he showed talent for and a marked leaning towards surgery, using impartially the open air or dark cabins in remote sections or the homes of the well to do, for his amphitheatres. Such was his success, that he determined to have a place of his own for his patients and, in 1909, the first hospital was opened, quickly outgrowing its facilities and in three short years it was necessary to enlarge it. So, in 1912, the Halcyon of 30 beds was opened and has been kept almost at capacity limit since that time. Dr. Belt's success was due to two things chiefly, his natural ability and his personality, and to these I would add his unusual diagnostic skill. Using the senses God gave him, he rarely failed to find out his patient's ailment and with a memory that was well nigh marvelous, he could recall symptoms and treatments a score of years afterwards. Years of general practice and careful training furnished a foundation for a success that was almost phenomenal.

Always busy, generally overworked and often almost exhausted physically, it is but natural that his health should be taxed to its limit and for the past few years, a good part

*Read before the South Piedmont Medical Society at its meeting at South Boston, November 16, 1926.

of the winter was spent in bed by reason of influenza or some intercurrent disorder, each leaving its mark and sapping his strength. Still his death came as a great surprise and shock to his friends and loved ones. When angina pectoris, that monarch of all ills, whose summons is rarely delayed and never disregarded, warned him of his call, he re-

sponded that he was ready. After a night of suffering, only partially relieved by opiates, he opened his eyes on the nurse who asked him if he didn't feel better, said "I don't know, child;" then turned and wrapping the draperies of his couch about him lay down to pleasant dreams.

CASE REPORTS

ACUTE APLASTIC ANEMIA FOLLOWING SAL- VARSAN TREATMENT FOR SYPHILIS: OPERATED ON IN PURPURIC STAGE FOR ACUTE PURPURA HEMORRHAGICA

By
Byrd Charles Willis, M.D.,
and
Claiborne T. Smith, M.D.
Rocky Mount, N. C.

An ex-service man and automobile mechanic, aged thirty, was first seen February 8, 1924, as an outpatient, complaining of pains of two years' duration in the lumbar region radiating down the right leg.

He gave a history of having a slight attack of influenza, of being mildly gassed, and of receiving a shrapnel wound in the right thigh in 1918. A piece of the shrapnel was still in the thigh. The pain in the back and leg was worse at night and in rainy weather; it was difficult for him to straighten up after he had assumed the stooping posture for any length of time.

Examination revealed some carious molars, tenderness over the right sacroiliac joint, and a hard foreign body, about 2 by 3 cm. under the skin of the inner side of the right thigh. The chest and abdomen were normal. The tendon reflexes were slightly exaggerated, the Babinski reflex was negative, the blood Wassermann reaction was strongly positive (4+), but the spinal fluid was normal.

The patient was advised to take treatment for syphilis, and this was started two months later. After eight injections of 0.3 gm. salvarsan the Wassermann reaction was negative. The treatment was given at weekly intervals, the last being given six weeks be-

fore his admission to the hospital, August 9, 1924. He had felt well until a week before admission when he stopped work on account of general malaise. A few days later he noticed blue spots on the arms. On the night before admission he felt chilly, had a sore throat, and his gums bled. He felt better after the gums began to bleed; the bleeding persisted after he entered the hospital. There was no history of bleeding in the family on the mother's side.

At the second examination the patient appeared well nourished and had good color, although he was obviously sick. The pharynx was covered with blood which seemed to be coming from the nose and the gums. The bleeding was fairly copious, but not alarmingly so. The tonsils were normal but the carious teeth were still present. The chest and abdomen appeared normal, except for an enlargement of the spleen noted on percussion. The organ extended from the seventh to the twelfth ribs. About the arms and legs were small purpuric spots varying in size from 1 to 10 mm.

The larger ones were oval and slightly elevated. The tourniquet test was positive. The blood pressure was 118 systolic and 80 diastolic, pulse rate 96, and temperature 100 degrees. The bleeding time was thirty minutes, clotting time fifteen minutes, and the clot was soft and non-retractile. The platelets were not counted, but they numbered very few in a smear. The differential count showed polymorphonuclears 6 per cent, mononuclears 32 per cent, and lymphocytes 62 per cent. The hemoglobin was 80 per cent, the leucocytes numbered only 1,400, and the erythrocytes 4,080,000; the color index was 1.

On the day of admission, August 9, the patient was given a transfusion of 500 c.c. of blood by the sodium citrate method.

August 10, the clotting time was six minutes, the leucocytes numbered 1,200, and the temperature was 99 degrees a. m. and 102 degrees p. m. This variation in temperature continued throughout the patient's stay in the hospital. There had been no bleeding from the gums since the transfusion. August 11, it was noted that his gums had bled for three hours during the preceding night, but there was no blood in the urine or feces, and the joints were not painful. August 12, there was copious bleeding from the gums, but no bleeding from the bladder or bowels. Fifteen cubic centimeters of whole blood was injected subcutaneously, with no effect. Later 20 c.c. of "coagulen ciba" was given intravenously. This caused the patient to have a chill but it did not stop the bleeding. August 13, bleeding from the gums continued, but there was still no blood in the feces. The patient was given a transfusion of 500 c.c. of citrated blood. August 14, the bleeding still continued. The clotting time was two minutes. The leucocytes numbered 1,000, the platelets were estimated as very scarce. August 15, there had been no bleeding for eight hours during the night. A transfusion of 500 c.c. of citrated blood was given. August 16, there was slight bleeding at intervals. August 17, there was slight bleeding during the day. Large clots were found in the mouth. The clotting time was five minutes, bleeding time one minute. The leucocytes numbered 1,400 and the erythrocytes 4,060,000; the hemoglobin was 75 per cent. August 18, because of the enlargement of the spleen and the little benefit from transfusion, splenectomy was advised.

The patient was on the operating table fifty minutes. A high left rectus incision was made and the small bowels packed off. The renal and diaphragmatic attachments were loosened and the lower pole of the spleen brought out. The spleen was closely attached to the greater curvature of the stomach. There were no adhesions to the diaphragm except the ligaments to it and the kidney. The pedicle containing the vessels was long. The ligature of the pedicle was begun at the lower pole and carried up onto the stomach attachment. The blood clotted

rapidly, but oozing continued from vessels beneath the clots. The blood appeared darker than normal, and there was general oozing everywhere. Hot packs were placed in the splenic bed and allowed to remain there while an effort was made to remove the accessory spleen. This was almost completely destroyed, but not all removed. At the beginning of the operation the pulse rate was 128; after the operation was completed it was 144. The spleen was about 15 by 8 by 6 cm., weighed 220 gm., and was soft in consistency. The liver appeared crinkled and felt firm. The gall-bladder collapsed easily, and its walls were thickened. Just at the lower pole there was an accessory spleen about 2.5 by 3 cm. Microscopic sections of spleen showed some increase of interstitial fibrous tissue and numerous blood sinuses, the spleen pulp no longer arranged in definite lymph tissue formation. No red blood cells seen in numerous blood sinuses, only red blood cells seen were those in definite blood vessels. If one did not know the tissue, he would be at a loss to distinguish its histology.

The bleeding stopped for several hours after the operation, but the patient seemed to be in a very critical condition. Immediately after the operation a transfusion of 500 c.c. of citrated blood was given. Seven hours after the operation the clotting time was five minutes, the leucocytes numbered 1,800, blood platelets were estimated as still very scarce. August 19, there was bleeding from the nose and mouth. The pulse was hardly perceptible, the patient spat up a black fluid. The leucocytes numbered 2,000, the erythrocytes 3,480,000, and the platelets were estimated as very scarce. The clotting time was two minutes. An attempt was made to wash out his stomach. As soon as the tip of the tube touched his pharynx he vomited a great quantity of black fluid. A few seconds later he complained of shortness of breath, went into opisthotonos and died. This was twenty-six hours after the operation. Necropsy was not permitted.

DISCUSSION

It was a question whether this was an idiopathic or symptomatic purpura. The syphilitic infection and subsequent treatment with salvarsan may have had some bearing on the condition or merely been coincidental.

A streptococcal infection would have given nearly the same picture, particularly with the prodromal symptoms and septic types of temperature. We regret that we did not have blood cultures to disprove infection of the blood stream. We think it reasonably safe to exclude benzol and trinitrotoluene poisoning because a mechanic in a small garage is not likely to come in contact with these chemicals. The prolonged bleeding and clotting times at the onset suggested hemophilia. On the other hand, bleeding continued after these became normal.

It was necessary to exclude aplastic anemia. While the patient presented the five cardinal symptoms of purpura hemorrhagica, namely, hemorrhage from the mucous membrane and ecchymosis into the skin, markedly reduced platelet count, prolonged bleeding time, non-retractile clot and positive trouinquet test, the differential cells and leucopenia were typical of aplastic anemia. Transfusions gave only transient relief, if any, and did not influence the platelet count; furthermore, the splenectomy was not followed by an increase in platelets or decrease in bleeding. These conditions would seem to indicate destruction of bone marrow rather than disturbance of the spleen, and that we were dealing with acute aplastic anemia or atypical acute purpura. It is well known that in acute aplastic anemia there is a first stage of purpura hemorrhagica of short duration. At this stage the red cells are not affected since their life cycle is longer than that of the platelets. In our opinion this patient was operated on in that stage of an acute aplastic anemia.

BIBLIOGRAPHY

1. Christian, H. A.: Purpura and allied conditions. Oxford Medicine, London, Oxford University Press, 1920, ii, 779-797.
2. Cohen, Isidore, and Lemann, I. I.: Splenectomy as a treatment of purpura hemorrhagica. Surg., Gynec. and Obst., 1924, xxxviii, 596-604.
3. Feinberg, S. M.: Aplastic anemia following neo-arsphenamin. Jour. Am. Med. Ass'n., 1922, lxxviii, 888.
4. Giffin, H. Z., and Holloway, J. K.: Hemorrhagic purpura. Med. Clin. N. Amer., 1923, vii, 241-248.
5. Minot, G. R.: Clinical discussion of the anemias. Oxford Medicine, London, Oxford University Press, 1920, ii, 589-679.
6. O'Leary, P. A., and Conner, H. M.: Acute purpura hemorrhagica as a complication in the treatment of syphilis. Amer. Jour. Syphilis, 1925, ix, 262-273.
7. Williamson, C. S.: Purpura hemorrhagica. Med. Clin. N. Amer., 1923, vii, 379-386.

MAXILLARY SINUSITIS, ANESTHESIA DOLOROSA AND TIC DOULOUREUX

By

V. K. Hart, M.D.,
Statesville, N. C.From Department of Head Specialties
Davis Hospital

This case is presented because there was complete ablation of function of the second division of the fifth nerve. Moreover, there was no involvement of either of the other two branches.

Negro man, aged 61.

Chief Complaint: Severe pain over right cheek.

History Present Illness: First came under observation 4-8-26 because of right sided headaches. As a result of a careful examination at this time including an x-ray of the sinuses, a diagnosis was made of right pansinusitis of luetic origin (four plus Wassermann). He was referred to his family physician for antisyphilitic treatment. The patient returned 11-3-26 complaining of severe pain over the right cheek with insomnia. Had sudden, shooting pains at times over the same area and lived in constant fear of such seizures, which usually came on at night, and lasted less than a minute. Between attacks had constant, severe aching over antrum.

Past Medical History: Nothing of value.

Family History: Negative.

Physical Examination: There was complete anesthesia over the second division of the fifth (right cheek, right lower lid, right side of nose, right upper lip). Blood could be drawn with a pin point with no pain whatsoever. The line of demarcation was sharp between this region and distribution of the first and second divisions. There was a hard mass over the lower right antrum about the size of a walnut. Neurological inspection gave no evidence of tabes. There was no involvement of any other cranial nerves with exception of the eighth. A moderate luetic deafness was present. The caloric reactions, however, were present and typical each side. There was only slight delay in the appearance of the nystagmus. Particular attention was paid to dysfunction of taste because of the relation of the fifth to the seventh via the chorda tympani.

Otherwise the findings were negative.

Laboratory: Wassermann four plus. Blood count showed mild anemia.

X-ray showed marked blurring right antrum.

Tentative diagnosis: Tumor superior maxilla, right. Undetermined origin.

Course and Therapeutics: Immediate operation was done under local anesthesia. The antrum was entered through the canine fossa. What was thought to be a tumor was evidently only bone proliferation from a much thickened anterior wall. The antrum was filled with degenerated and polypoid tissue. This having been evacuated and the anterior wall largely removed, an opening was made into the nose (Caldwell-Luc operation) and the opening into the mouth closed.

Specimens of this bone were sent to Dr. James B. Bullitt, pathologist at the State University. His report is quoted verbatim. "The sections show nothing but essentially normal bone, but part of this is somewhat denser in structure than one expects to find in the wall of the antrum. There is no sign of tumor and no inflammatory exudate, but from the density of the bone I assume that there has probably been some previous inflammation that has caused the formation of this eburnated bone." Consequently what was thought to be a tumor was probably an exostosis due to luetic ostitis.

Following operation the patient's pain entirely disappeared. The promptness of the relief was impressive.

The anesthesia, however, has persisted. Probably it will persist, at least in part for reasons set forth below.

Revised diagnosis: Luetic ostitis right antrum.

DISCUSSION

The unusual anesthesia in this case is only explained by careful reflection as to anatomical considerations. The second division of the fifth after passage through the foramen rotundum, swings through the sphenomaxillary fossa, passes through the sphenomaxillary fissure, and enters a canal in the floor of the orbit, which floor is largely the roof of the antrum. It makes its exit through the infra-orbital foramen.

Therefore, these pathological steps in sequence are suggested: 1. Luetic sinusitis and periostitis. 2. Luetic ostitis. 3. New bone formation and exostosis. 4. Encroachment on

the maxillary division of the fifth by new bone formation as it passes through the roof of the antrum. 5. Consequent neuritis. 6. A true atrophy following the neuritis.

Any nerve degeneration may give pain. If a sensory nerve, the pain is often referred to the anesthetic area supplied by the nerve (anesthesia dolorosa).

Any severe neuralgia of one or more branches of the trigeminal is referred to as *tic douloureux*. When accompanied by sudden, painful spasms of the facial muscles, it is often called "*painful tic convulsif*."² Neuralgia of the sensory division of the seventh is sometimes called Hunt's geniculate neuralgia. Another type of pain in this region is often due to involvement of the sphenopalatine ganglion.

It is interesting to note that cocainization of the ganglion did give partial relief showing some involvement. Moreover, the mucosa of the lateral wall of the nose was very sensitive and this is in part innervated by branches from Meckel's ganglion. Such involvement is not uncommon in a chronic maxillary sinusitis.

SUMMARY

The outstanding features of this case were:

1. Pain limited absolutely to the maxillary division of the fifth.
2. Complete anesthesia limited to the distribution of the same nerve.

BIBLIOGRAPHY

1. Piersol, George A.: *Human Anatomy*, Vol. 2, Ed. 7, Phil. and London, Lippincott, 1919, pp. 1230-1249.
2. Stevens, A. A.: *The Practice of Medicine*. Phil. and London, W. B. Saunders, 1922, 933-936.

GANGRENE IN BOTH LEGS, COMPLICATING PREGNANCY

By
Reid Patterson, M.D.
Charlotte

Mrs. T. J. K., white, aged 32 years, seen March 2, 1924.

Family History: No bearing on case.

Past History: Had influenza in 1918, measles when a small child, no infectious fevers, no chest infections, but repeated attacks of tonsilitis. Tonsils were removed about six years ago. No digestive or urinary disease.

Menstrual-Maternal History: First menstruated at age fourteen but was irregular and

suffered premenstrual pains with scanty flow. Married in 1914. Her first child was born Oct., 1917, normal delivery and weight of baby was seven and one half pounds. This child died at age of seven months from cerebro-spinal meningitis. Patient miscarried at three months on May 10, 1920. Cause of miscarriage not known. Second child born July 20, 1921, normal delivery and weight of baby was seven and one half pounds, but child was cyanotic and died on the 10th day from what I diagnosed as enlarged thymus gland. Never any trouble during or after deliveries except the last one when five hours afterwards she had a severe attack of asthma.

Present Illness: Has had mild influenza for a week, aching and slight fever with asthma during this time.

Physical Examination: Right lower chest, broncho-pneumonia and pleurisy. Heart enlarged and loud mitral murmur. Pulse 140. Slight cough but no edema. Patient about two and one half months pregnant. About ten days after onset of present illness I was called to see her about four a. m. and found

patient dyspneic and cyanosed. After giving morphia and digifolin this attack did not improve for four hours. About six hours afterwards she complained with numbness in both feet and legs and feet continued to be cold after the use of heat. Heart rate quieted down during the day but the next day a slight discoloration was noticed in both feet very much like iodine stain, also there was foot drop. This discoloration increased and continued upward with hardening of tissues until a distinct line of demarcation was found in lower third of right leg and at the knee joint of left leg. This distinct line was formed about four weeks after the heart attack. Her blood pressure was 110-75 and Wassermann reaction was negative. Urinalysis sp. gr. 1016, albumin faint trace, sugar faint trace (lactose) no blood cells, few pus cells, no crystals or casts. Patient continued to suffer acute pain in legs and feet and large doses of morphia were required to keep her quiet. Heart action continued rapid and digitalis in drachm doses were given at frequent intervals. On April 27, 1924, amputation was done at junction of the middle and lower thirds of thigh, ether used for the anesthetic.



Photographs made day of first operation

The patient reacted nicely from the operation and ten days later amputation of right leg was done through the upper third, ether being used as the anesthetic again. Both stumps healed nicely with out any slough and patient left the hospital in eighteen days after the first operation.

Pathological Report: The only difference in the findings was that the formation of the line of demarcation in one leg took place above the knee and in the other leg above the ankle. This is accounted for only by difference in the efficiency of the collateral circulation. At operation there was no pulsation noted in the stump of the femoral artery after it had been severed, nor was there any hemorrhage from the open end, yet no clot was present. The muscles were very pale and after the tourniquet was removed there was very little oozing from any of the tissues. The end of the bone, which usually oozes, did not. What hemorrhage there was appeared to be from small vessels of the collateral circulation. On account of this, doubt was felt as to the outcome of the flaps. In spite of the evidence of little circulation of blood in the stumps, the flaps healed nicely and the patient went on to a satisfactory convalescence. During this illness and the operation her pregnancy continued and on August 6, 1924 I delivered her a baby boy that weighed five and one half pounds, which I think was an eight months baby, delivery being normal and very rapid. She improved rapidly after delivery but did not seem to take any interest in her baby or in anything in her home. The baby was normally developed in every way with exception of great toe on left foot was larger than usual. He was put on modified milk with satisfactory results. Patient's heart quieted down immediately after her delivery and at the end of four weeks she was able to be put in rolling chair for short intervals, and a few weeks later was able to go out in automobile for a short ride. There has been no recurrence of any heart attacks and patient at this time weighs more than she ever weighed even before her operations. At the present time (30 months after operation) she is wearing two artificial limbs and with the aid of a cane is able to get about the house alone, and attend to most of her household duties.

SUMMARY

(1) Chronic myocarditis. (2) Bronchopneumonia, with pleurisy. (3) Acute endocarditis. (4) Pregnancy. (5) Bilateral gangrene of lower extremities with amputation.

A PROBLEM IN DIAGNOSIS

By

F. R. Taylor, M.D., High Point

Truth is stranger than fiction. Unique pathology is found in remote places as well as in hospitals and medical centers. The patient whose case is here described from memory was observed about a year ago under conditions that made it rather impracticable to have a thorough written record, but she presented so many interesting features of note, including a condition which I have not seen described in medical literature, viz., unilateral edema of the brain due to serum disease, that it seems perhaps worth while to make even this scrappy report in the absence of a systematic record.

A young married woman, with a family and past history of no medical significance, had been delivered of a healthy baby about 12 months previously, while she herself was suffering from scarlet fever. This cleared up, but an albuminuria persisted, though there was no history of edema or hypertension.

Twelve days before I saw her, she was taken with a severe facial erysipelas. Her physician gave her polyvalent anti-streptococcic serum. She continued to get worse, despite this and other general and local measures. One night, being very ill and unable to get her doctor, she called me. The erysipelas was obvious and she was semidelirious, with a temperature of over 105. She complained of earache and pain in the left mastoid region. There was marked redness and edema over the mastoid process, but this was continuous with the redness and edema of the face, so was hardly diagnostic of mastoid infection. The erysipelas, moreover, had caused the canal of the left ear to become closed through swelling, so that it was impossible to see the drum.

The patient was given temporary relief, and next morning I saw her physician and described the situation to him, and suggested that an otologic consultation might be helpful. He, however, asked me to take charge

of the patient, and have any consultations desired, as he did not want to handle a case of erysipelas owing to several obstetric engagements. I therefore took an otologist to see her. Two questions loomed up in our discussion; did she have a mastoid infection, and could she stand being moved several miles to a hospital and operated on if she did? We were both unable to answer the first question with certainty, but were agreed that her condition was so critical that she ought not to be moved unless the diagnosis was practically certain, so we resorted to watchful waiting. Meanwhile we found that the urine was loaded with albumin, a variety of casts, and pus, and contained a few red cells. Alkaline diuretics were given. A night or so later, her pulse, which had been running in proportion to her temperature, slowed down to about 70, without a corresponding fall in temperature, and she developed very distinct signs of irritation of one side of her central nervous system. Especially marked were symptoms referable to the cerebellum—a gross unilateral ataxia, with a tendency to vomiting if she raised her head to one side, but not to the other. There were some signs of upper motor neuron irritation of unilateral type and inequality of the pupils. A brain abscess was feared, and a doubtful prognosis given. A consultant agreed that operation was not indicated, because of her very grave condition.

The next morning a typical urticaria was present, obviously due to the anti-streptococcic serum she had previously received. A hypodermic of adrenalin relieved this considerably, and the "brain abscess" rather suddenly disappeared! Her condition improved for a day or two. Then she had a reinvasion of her erysipelas and was very sick for several days more. The nephritis and pyelitis were rather resistant, but finally cleared up until her urine showed nothing except an extremely faint trace of albumin with no abnormal microscopic findings, and no hypertension or edema.

INDIVIDUAL VARIATIONS IN THE RESPONSE TO INSULIN

By

E. J. Wannamaker, jr., M.D.
Charlotte

Having been fortunate in seeing something of the work of Dr. Henry J. John in Cleveland, I wish to pass on to the readers of *Southern Medicine and Surgery*, a phase of his work which must be of interest to all who treat diabetics.

Dr. John has charge of the diabetic work of the Crile Clinic and the Cleveland Clinic. His graphic charts¹ here reproduced, demonstrate very impressively the variations in response to insulin as seen in different patients under similar conditions and in the same patient under constant conditions.

No. 1 shows the varying response to insulin by four patients. In all four cases the insulin was administered intravenously. Each patient was on a diet of carbohydrates gms. 100, protein gms. 60, fats gms. 128. The observations all start at 8 a. m., and breakfast was given just after the eight o'clock insulin. The figures at the top of the chart represent hourly intervals, and the figures on the left indicate the milligrams of blood sugar per 100 c.c. Note in case one the very marked rise following the 20 units of insulin, and the continuance of the rise even after an additional 10 units; then a fall, with a rise again after 10 units given at the eighth hour. In case two, there was again a slight rise; then fall, following the second dose; sugar then was kept down by small doses at regular intervals. In case three, we get what appears to be a delayed effect, but breakfast should not represent a marked factor in this delay, as the 32 units given at eight o'clock should more than care for carbohydrates ingested. The rise five and a half hours later is probably due to termination of the effect of insulin previously given. Case four, more nearly agrees with our former conception of normal response to insulin, though here again a rise is present following the third dose of 16 units of insulin at the end of the second two-hour interval.

No. 2 represents the varying response of the same patient to insulin on different days

¹Published in the *Journal of Laboratory and Clinical Medicine*, March, 1926.

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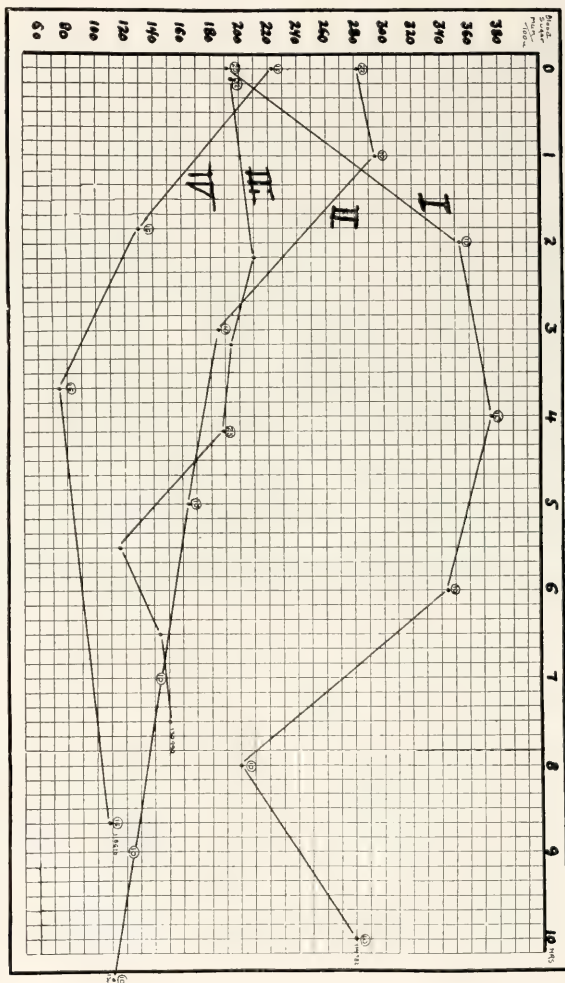
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JAMIE W. DICKIE, M.D., *Physician in Charge,*
Southern Pines, N. C.

The patient is a man, aged 26, with a fairly severe case of diabetes. Sixteen units were given at 5:30 p. m. and observations on the

was checked by an additional 30 units; the sugar level then dropping to 50 mgs. per 100 c.c., and remaining between 50 and 60 mgs.

Chart No. I.—Blood-sugar curves showing variations in the response to varying doses of insulin in four diabetic patients.



blood were made at 15 minute intervals for the three hours following. There was at first a steady drop, then a beginning rise which

for two hours; a slight reaction occurred 45 minutes after giving the 30 units of insulin, and the blood sugar level at the time of re-



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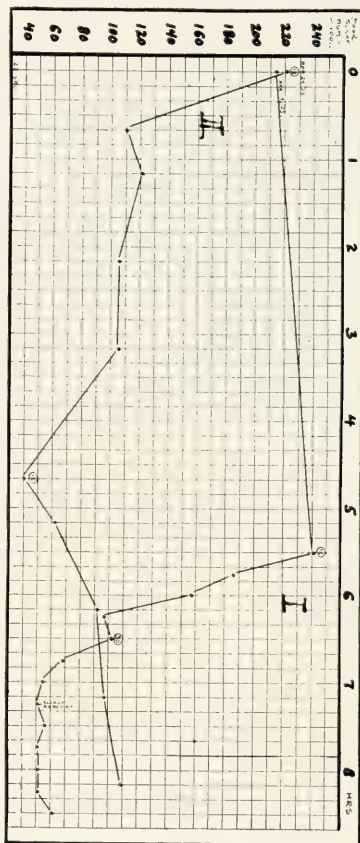
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action was 50 mgs. per 100 c.c. Several days later 12 units were given at 8 a. m., followed by a fall of blood sugar from 220 to 40 mgs. in the course of four and a half hours. With the blood sugar at 40 mgs. another dose was given, this of 15 units, and

of insulin have been given by these investigators without any reaction occurring.

We saw in Dr. John's clinic a case of a girl of 11 who had at times been reduced to extremely low blood sugar without reaction, and recently while having a high blood sugar

Chart No. II—Blood-sugar curves showing variations in the response to insulin in a diabetic patient on two different days.



instead of a further fall there occurred a progressive rise to 100 mgs. per 100 c.c. The opinion is gaining ground that reactions are not due to hypoglycemia per se, but to some extraneous substance which we give along with insulin as now obtained. In Prague an attempt is being made to determine the detrimental substance and by its elimination do away with reactions. Very large quantities

had severe reactions at varying intervals. At the time of these reactions there was no associated infection, and Dr. John stated that he had no explanation for the reactions. He also stated that he had frequently had blood sugars as low as 30 mgs. per 100 c.c. without reaction occurring and had had many cases similar to the one just cited where reactions occurred with hyper-glycemia present.

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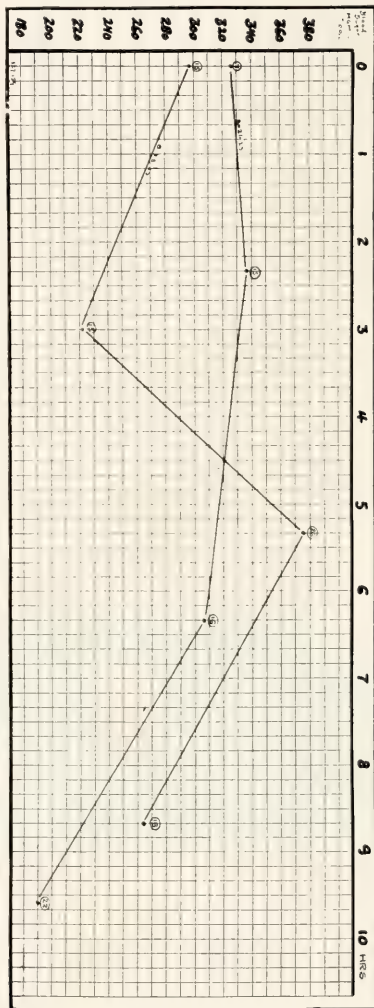
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Woman of 25, brought to hospital in coma. The picture is not complicated by taking food and shows the patient's response to insulin on two different days. Following the first

per 100 c.c. during three hours; then following a second dose of 15 units there was a progressive rise to 375 mgs.; 26 more units reducing blood to 263 mgs. in three hours

Chart No. III—Blood-sugar curves showing variations in the response to insulin in a diabetic patient on two different days.



dose of seven units, there was a continued rise of blood sugar for over two hours. Two days later, the morning dose of 15 units was followed by a drop from 297 to 232 mgs.

and twenty minutes.

Chart 4 is that of a woman, age 48, who was in coma when first seen. The chart shows hourly doses of 20 units of insulin and

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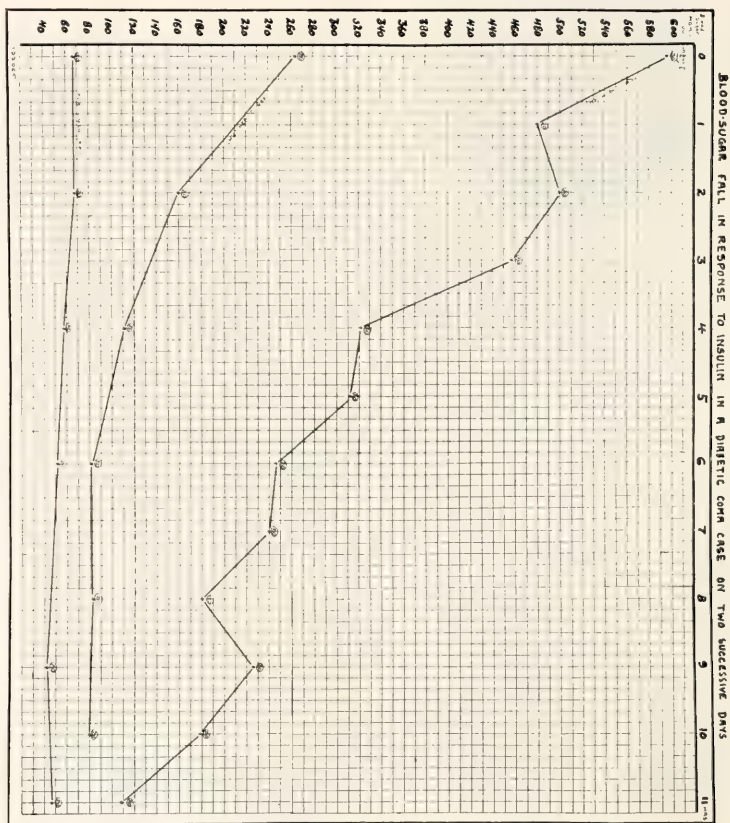


blood estimates made at the same time, this being started immediately after admission and continued for 12 hours, and thereafter at two-hour intervals. Again we have the varying response to insulin, shown during the first fourteen hours, though a fairly uniform drop to normal level. During the remaining 20

the same doses of insulin.

2nd: Very slight further decrease in blood sugar when at or slightly below the normal level and no change in blood sugar after hypoglycemia level has been reached, also no reaction occurring with blood sugar as low as 40 mgs.

Chart No. IV—Blood-sugar curves showing variations in the response to insulin in a diabetic patient on two successive days.



hours we see the low level maintained with the same size doses of insulin given regularly at two-hour intervals.

The outstanding features in this case are:

1st: A fairly uniform decrease in blood sugar from the very high level to normal, though with some variation in response to

Dr. John has drawn the following conclusions from his work:

(1) The amount of insulin administered intravenously appears to bear no regular relation to the fall of blood sugar.

(2) While the administration of in-

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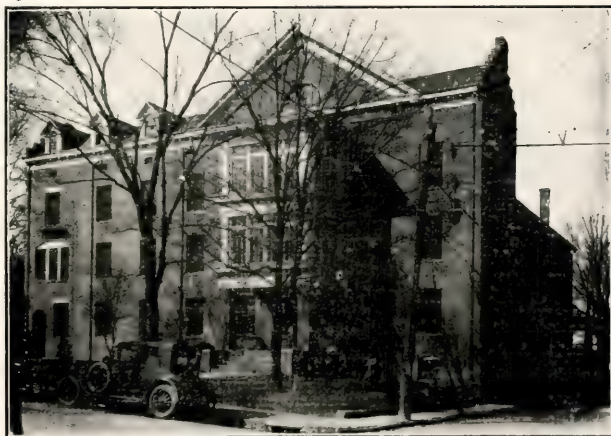
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sulin usually produces a decrease in the blood sugar, in some instances it is followed by an increase which may or may not be related to postprandial hyperglycemia.

(3), In general, whatever, the primary effect of insulin, repeated doses result in a decrease in the blood sugar; this apparently cumulative effect, however, is independent of the size of the doses.

(4) The level of blood sugar per se is not a criterion of the probability that a reaction will follow the administration of insulin. Thus a large dose of insulin may be given in the presence of hypoglycemia without any resultant reaction; and in another case a reaction may occur in the presence of a marked hyperglycemia.

NEWS NOTES

APPLICANTS LICENSED BY ENDORSEMENT OF CREDENTIALS, DECEMBER 1, 1926

<i>Name</i>	<i>Address</i>	<i>Medical College</i>	<i>Year</i>	<i>State</i>
Black, Hugh Ratchford	Spartanburg S. C.	U. of Md.	1883	(S. C.)
Brown, James Steven, jr.	Hendersonville, N. C.	Tulane	1925	(Nat.)
Carr, Eugene Morrison	Asheville, N. C.	Johns Hopkins	1919	(Md.)
Fuller, Rawley Howard	Clover, Va.	Med. Col. Va.	1905	(Va.)
Harvey, Francis Rudd	Kitchener, Ont.	U. of Toronto	1910	(Can.)
Hopkins, Percy Isaiah	Dothan, Ala.	Vanderbilt U.	1899	(Ala.)
McChesney, William Wallace	Abingdon, Va.	Med. Col. of Va.	1915	(Va.)
Ogilvie, Hansen Slaven	Charleston, W. Va.	Med. Col. of Va.	1909	(Va.)
Rhudy, Booker Ephraim	Abingdon, Va.	Med. Col. of Va.	1916	(Va.)
Stahlman, Freder'k C. (Initial)	Charlerio, Pa.	West Pa. Med. (U. Pittsburgh)	1896	(Pa.)
Thomason, James Archibald	Fountain Inn, S. C.	U. of Md.	1910	(S. C.)
Weltmer, Silas Woodson	Asheville, N. C.	Med. School St. Louis U.	1921	(Mo.)
Wood, Landrum Walker	Fountain Inn, S. C.	Atlanta Med. Col. (School of Medicine Emory University)	1914	(S. C.)
McFadden, Ralph Hope	Chester, S. C.	Med. Col. S. C.	1912	(S. C.)

THE MECKLENBURG COUNTY MEDICAL SOCIETY, meeting on December 7, elected officers as follows: Dr. J. P. Kennedy, president; Dr. J. A. Elliott, vice-president; Dr. T. P. White, secretary.

An important event of the session was the presentation of a watch to Dr. C. A. Misenheimer, in commemoration of his arriving at the age of 70. Dr. C. S. McLaughlin made the eloquent presentation address which follows:

Mr. President and gentlemen of the Mecklenburg County Medical Society:

We come tonight to do honor to one of our members, whom Ajax with his heels of wool has pursued with relentless fury. In spite of all this, this member is among us tonight, an upstanding youth of seventy summers. He saw modern medicine born and

kick off its swaddling clothes, and through him and his co-workers we have seen it reach at least the age of adolescence.

There is nothing more eminent than the study of the human body from the youth up, knowing the ills that beset it and the remedies that will relieve it and practicing upon the rich and the poor alike without the thought of gold. He has gone up and down our city for forty years, practicing his art in the palaces and the hovels, like the lowly Nazarene, continually doing good. He has always lived in a house beside the road and been a friend to man, and to the young medico he has been as a rock in the weary land. If we were in search of an honest doctor, we could explain in the words of the immortal Diogenes, "We have found him." I refer to Dr. Chas. A. Misenheimer.

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O. O. Ashworth, M.D., Internal Medicine

Austin I. Dodson, M.D., Urology

Fred M. Hodges, M.D., Roentgenology

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Come forth Doctor:

We rejoice that the great Jehovah has seen fit to spare your long and useful life to this eventful occasion in order that we may do ourselves this small honor. On this the 70th anniversary of your successful passage under that triumphal arch through which all candidates for mortality must pass, I am appointed to deliver to you this souvenir. Take this and wear it with our benediction till you shall have opened your grace-wiped eyes beyond the mist that blinds us here, in that new and larger life of that serenest sphere; then pass it on to your offspring as a living memento of the esteem and admiration in which their grand old father was held by his contemporaries of the Mecklenburg County Medical Society.

At the regular meeting of the AVERY COUNTY MEDICAL SOCIETY at Newland, N. C., October 25th, Dr. W. B. Burleson, of Plumtree, was elected president and Dr. B. H. Hardin, Banner Elk, secretary. Very interesting and instructive papers were read by the members present. Dr. Tate read a paper on "The Operative Procedures of Obstetrics;" Dr. Hardin made "A Few Remarks Regarding Gall Bladder Symptoms, Clinical and Radiological;" Dr. W. B. Burleson described "A Simple Method of Cauterizing the Cervix." Dr. Sloop reported several cases of very virulent diphtheria which had come under his notice recently. At this time Dr. J. F. Powers, of Newland, N. C., was elected a member of the society.

THE RUTHERFORD COUNTY MEDICAL SOCIETY met December 8, at the Isothermal Hotel, Rutherfordton. After an excellent luncheon an interesting program was heard. At the business session the following officers for the ensuing year were elected: President, Dr. W. T. Head, of Melvin Hill, Polk county; vice-president, Dr. J. F. Hunt, of Spindale; secretary and treasurer, Dr. W. C. Bostic, of Forest City; delegate to North Carolina State medical meeting, Dr. C. F. Gold; alternate delegate, Dr. R. H. Crawford; censor, Dr. G. P. Reid, of Forest City.

Dr. C. N. Peeler, of Charlotte, read an excellent paper on bronchoscopy and foreign bodies in the trachea. The methods of exploring the larger bronchi, how such articles

as pins, peanuts, etc., are removed from the windpipe, were explained.

Dr. H. F. Nafey, resident surgeon of the Rutherford Hospital, read a very good paper on arthritis. All papers were well discussed.

THE SEABOARD MEDICAL ASSOCIATION met in New Bern on December 8-9, under the presidency of Dr. Geo. A. Caton. Among the speakers were Dr. Cyrus Thompson, Jacksonville, and Dr. W. S. Rankin, Charlotte. A fuller account will appear in a later issue.

THE PEE DEE MEDICAL ASSOCIATION'S program for its meeting at Florence, S. C., December 8 was as follows:

Address, Dr. A. J. Crowell, Charlotte, N. C., president Tri-State Medical Association.

Address, Dr. Geo. Bunch, Columbia, S. C., president South Carolina Medical Association.

Some Problems in Urological Diagnosis, Dr. W. R. Barron, Columbia, S. C.

The Use and Abuse of Caesarean Section, Dr. Douglas Jennings, Bennettsville, S. C.

Treatment of Nephritis, Dr. R. J. Coney, Cheraw, S. C.

The Use of Antitoxin in Scarlet Fever, Dr. C. R. May, Bennettsville, S. C.

Birth Control, Eugenics and the Physician, Dr. Jamie A. Norton, Conway, S. C.

The Value of Preventive Medicine to the Physician, Dr. Ben F. Wyman, Columbia, S. C.

How the Physician Can Contribute in Forwarding Public Health, Dr. P. H. Brigham, Florence, S. C.

A Paper for Criticism, Dr. F. N. Andrews, Marion, S. C.

OFFICERS ELECTED BY COUNTY MEDICAL BODIES—Officers were elected at the annual meeting of the Guilford County Medical Society, held on the evening of December 2, in Greensboro, in the Guilford court house, and delegates to the annual meeting of the North Carolina Medical Society were chosen.

Following are the officers chosen:

President, Dr. Harry L. Brockmann, High Point; vice-president, Dr. D. W. Holt, Greensboro; secretary-treasurer, Dr. W. L. Jackson, High Point.

Delegates to the State meeting are;

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Dr. F. R. Taylor High Point

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Tenth District

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Dr. C. S. Lawrence Winston-Salem

CHAIRMAN COMMITTEE ON OBITUARIES

Dr. E. G. Moore Elm City

Dr. C. W. Banner, Greensboro; Dr. J. F. Spruill, Jamestown; Dr. Harry L. Brockmann, High Point; Dr. B. R. Lyon, Greensboro; Dr. C. E. Reitzel, High Point. Alternates are: Dr. R. O. Dees, Greensboro; Dr. W. J. Meadows, Greensboro; Dr. J. W. Tankersley, Greensboro; Dr. Frank Sharpe, Greensboro; Dr. Charles Reeves, Greensboro.

Dr. E. R. Michaux, the retiring president, presided over the meeting, and at its conclusion he made a brief talk, thanking the members of the society for their co-operation in the work of the organization in the past year.

Meeting also last night, the wives of the members of the society decided to form an auxiliary to the society. This meeting was held in another of the assembly rooms of the court house and plans were tentatively formulated for organizing the auxiliary. Officers will be elected at a meeting in January and the organization of the auxiliary will be formally effected.

At the monthly meeting of the GASTON COUNTY MEDICAL SOCIETY on December 2, Dr. J. R. Ashe, of Charlotte, talked on some acute conditions of interest to the pediatrician and general practitioner.

Officers for the ensuing year were chosen as follows: President, Dr. James M. Pressley, of Belmont; first vice-president, Dr. James W. Reid, of Lowell; second vice-president, Dr. George R. Patrick, of Bessemer City; secretary-treasurer, Dr. James A. Anderson, of Gastonia, re-elected.

THE SIXTH DISTRICT MEDICAL SOCIETY met in Durham on December 2, with 116 members present. The subject of the address by the president, Dr. Thurman D. Kitchin, Wake Forest, was "The Physician's Part in Health Education."

North Carolina's Health Officer, Dr. C. O'H. Laughinghouse, talked of some phases of the work of the State Board of Health and Dr. Hubert Royster spoke in a happy vein.

Dr. A. J. Crowell, Charlotte, president of the Tri-State Medical Association, spoke on the functions of this body. Dr. J. Q. Myers, Charlotte, president of the Medical Society of the State of North Carolina, delivered an address.

Officers elected at the June meeting include Dr. Kitchin, president; Dr. S. P. Burt,

Louisburg, vice-president; Dr. V. M. Hicks, Raleigh, councilor, and Dr. B. W. Fassett, Durham, secretary.

The scientific papers follow:

"A Vision of Future Medicine," Dr. R. F. Yarbrough, Louisburg.

"Infectious Mono-Nucleosis or Glandular Fever," Dr. Hubert B. Haywood, Jr., Raleigh.

"Clinical Treatment of Acute Tuberculosis," Dr. Calvert R. Toy, Chapel Hill.

"The Relation of Obesity to Metabolism and the Endocrines," Dr. Verne S. Caviness, Raleigh.

"Fractures of the Femur," Dr. W. B. McCutcheon, Durham.

"Incomplete Duodenal Obstruction," Dr. K. P. Neal, Raleigh.

"Ultra-violet Radiation in General Practice," Dr. C. M. Walters, Burlington.

"Chylothorax With Report of a Case," Dr. R. L. Felts, Durham.

A MEDICAL ARTS BUILDING ASSOCIATION has been organized in Durham for the purpose of erecting a building of eight or ten stories for the offices of doctors and dentists.

Application has been made for a charter, with an authorized capital stock of \$300,000.

Officers and directors have been selected: Dr. L. S. Booker, president; Dr. C. P. Norris, vice-president; Dr. F. C. Smith, secretary; Dr. Foy Roberson, treasurer, and directors, Drs. B. W. Fassett, N. D. Bitting, R. L. Felts, W. M. Coppredge, B. U. Brooks, O. W. Holloway, L. M. Edwards, H. O. Carr.

DR. A. A. BARRON, of Charlotte, announces the establishment of a free neurological and endocrine clinic, on Friday afternoon of each week, for those unable to pay.

DR. JAMES LOWRY PRESSLEY, of Statesville, and Miss Mary Love Babington, of Gastonia, were married November 15.

DR. J. MARION SIMS, a native of Lancaster County, S. C., whose death occurred on November 13, 1883, was extolled by Senator Roach H. Stewart, at the public exercises held in Lancaster on November 14, to honor Dr. Sims' memory.

DR. F. A. SHEPARD, of Liberty, N. C., died

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Dr. Z. G. Smith.....Marion, South Carolina

Dr. William Allan.....Charlotte, North Carolina

To Serve Three Years

Dr. Warren T. Vaughan.....Richmond, Virginia

Dr. M. H. Wyman.....Columbia, South Carolina

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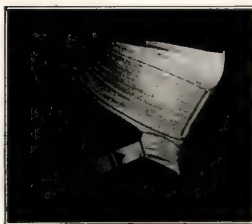
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on December 9, of pneumonia. Dr. Shepard was educated at the Universities of North

Carolina and Tennessee and was 46 years of age.

REVIEW OF RECENT BOOKS

CRIMINAL RESPONSIBILITY, by Charles Mercier, M.B., F.R.C.P., F.R.C.S., Lecturer on Insanity at the Westminster Hospital Medical School and at the Medical School of the Royal Free Hospital; Author of "The Nervous System and the Mind;" "Sanity and Insanity;" "Lunatic Asylums, Their Construction and Management;" "Lunacy Law for Medical Men;" "Psychology, Normal and Morbid;" "A Textbook of Insanity;" etc., etc. New York, Physicians and Surgeons Book Co., 353 West Fifty-ninth St., 1926.

(Editor's Note—Desiring the viewpoint of the Law, a member of the Charlotte Bar was requested to make this review.)

Criminal Responsibility is a beautifully written work. If it served no other purpose than to demonstrate that so technical a subject could be intelligently discussed in a clear and facile style, it would be most useful. But in the bold, piercing, logical analysis made of the difficult subject matter, the author has, in my opinion, made a fine contribution to the somewhat uncertain field of medico-legal jurisprudence.

On the very outset the author makes it plain that his chief concern in dealing with the problem of responsibility is to determine rather what the rules should be than what the rules are. He asks in substance the following question:

Under what circumstances does an enlightened public opinion feel that uneasiness which demands for its relief the infliction of pain?

And, after carefully analyzing both the question and the principal terms which he uses in replying, he gives the following answer:

When it perceives a voluntary act in which the actor seeks gratification by inflicting unprovoked harm upon others.

Mercier is of the opinion that one should be held responsible for all acts which fall within the scope of his definition, excluding by implication responsibility for such acts as are not included.

There is only one adverse criticism of im-

portance which I would make of the views laid down in Criminal Responsibility. The author regards retribution as the first concern of the law in meting out punishment for crime, stating that deterrent of like acts is of a secondary importance. Admitting this to be historically true, I do not believe it to be the present aim of the law; rather I consider the deterrent aim of punishment as the law's chief and controlling purpose.

Broadly speaking, law is the voice of the race-mind; it is a dictation by groups of society of those rules which lesser groups and individuals must obey. And this is true whether a country is ruled by an absolute despot or by the most democratic of all possible forms of government; for the sanction of all law comes from the balance of power, and in the final analysis the balance of power lies in the majority of the people.

What is the chief purpose of the law? Why should a majority of the people impose upon all people, including themselves, certain restrictions of conduct? Before it is seriously considered the real answer seems absurd. Restrictions are imposed so that each person may ultimately have the utmost freedom of action.

Criminal laws are rules prohibiting the doing of certain acts. These rules are laid down so that within the unrestricted sphere of action all persons may have the greatest freedom. Society, or the State, is chiefly concerned that certain acts, harmful to the majority, shall not be committed. In one sense, the punishment of those who transgress the rules laid down is to show that these rules are not laid down in jest, and that to disregard them is sure to cause suffering on the part of the offender. The certainty of unpleasant consequences attaching to the doing of an act is perhaps the most effective method of retarding the probability of that act being committed. And the law is more concerned with the practical problem that given acts which it has defined as harmful be not com-

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mitted than it is to gratify a group instinct of vindictiveness. Mercier's views of the reason and aim of punishment are highly important as effecting his treatment of the punishment. For any rationally minded man considering punishment on the one hand as primarily the expression of the vindictive nature of man, and, on the other hand, as a necessity to prevent harmful acts because punishment is the surest known way to prevent them, could hardly regard the responsibility essential to call forth punishment in the same light.

I consider Mercier's analysis into the workings of minds wholly and partially insane as a splendid piece of work. His exact definition of terms gives a welcome clarity to a subject which is usually most confusing.

On the whole, I regard his work as being a little too metaphysical, a little too lenient in its attitude as to who should be held responsible for their acts. And I think this view occasioned by the fact that the author is considering punishment primarily as a vindictive expression, and, therefore, he regards it almost a necessity to find an excuse to inflict punishment on the individuals who have broken the rules of the criminal law in committing those acts which the criminal law declares to be crimes.

The fine labor of the author is certainly not lost. To my mind its comprehensive definitions, viewed from the legal standpoint, will be of greatest aid in the analysis of insanity wherein it becomes a problem of the civil law, although it seems to be the clear intent of the author that his treatment be of the rules of the criminal law. No one could read the book and not become better acquainted with perhaps the most interesting and difficult of all subjects the play of human intelligence. And assuredly no one could read the book without experiencing a real pleasure in the beauties of its flawless English.

Donnom W. Spencer.

Report on THIRD INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY, Paris, April, 1925, by Commander William Seaman Bainbridge, M.C., United States Naval Reserve Forces, Member of Permanent Committee, Delegate from the United States. Reprinted from THE MILITARY SURGEON, May to August, 1926, inclusive, Washington, D. C., 1926.

The details of the business meeting of considerable interest. The subjects reported on, of a professional nature, included: technical specialization in the several services, tuberculosis, psychiatry, the selection of pilots for the air service, hypnosis in the diagnosis of malingering, arthritis, dressings and suture material, special optometric methods, and vaccination against smallpox and typhoid.

THE MEDICAL CLINICS OF NORTH AMERICA, Vol. 10, No. 3, Mayo Clinic Number. November, 1926. Philadelphia and London, W. B. Saunders Company.

A group clinic is presented illustrating problems in abdominal diagnosis. It is noted that the laboratory is often looked to, when the means of diagnosis are at hand in the history and bedside examination. A case of multiple papillomatosis of the gall-bladder simulating gastric ulcer, and others illustrating hematemesis and melena occasioned unusually, are reported.

Glandular deficiencies are treated rather at length and seven case histories submitted; these embracing thyroid parathyroid and adrenal deficiency. Clinics of general interest are those on diuretics in cardiac edema, idiopathic hypertension, intravenous treatment in uremia, cutaneous lesions, diagnostic of constitutional complaints, hysterical paralysis, and pregnancy and diabetes.

A SOUND ECONOMIC BASIS FOR SCHOOLS OF NURSING and Other Addresses, by Mary Adelaide Nutting, R.N., M.A., Author of "A History of Nursing" in collaboration with Lavinia L. Dock, R.N. Principal of the School of Nursing and Superintendent of Nurses, The Johns Hopkins Hospital School of Nursing, Baltimore, 1894-1907. G. P. Putnam's Sons, New York and London, The Knickerbocker Press, 1926. \$2.50.

This is a collected series of valuable papers on many phases of nursing. The first is an address before the New York State Nurses Association, in 1916, and has the title from which that of the collection is taken. In this address the need for endowments for placing schools of nursing on a more nearly even footing with other schools is stressed.

Among the problems of training schools to be worked out are those growing out of inadequate preliminary training; the subordination of the training school to the needs of the

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hospital; the tendency of nursing needs to increase more rapidly than the facilities for meeting them are added; and the need for more facilities for training for special work.

The establishment of training schools by hospitals inadequate equipped with *personnel and materiel* is deplored. Suggestions are made for raising the educational standards.

There are addresses on nursing opportunities, training visiting nurses, training in psychopathic nursing, ideals, outlook, the evolution of nursing, thirty years of progress, and many others.

This is a most exceptional book, made up of addresses dealing with problems of great intricacy and importance. Its careful study should result in good for nurses, doctors and patients.

THE MEANING OF DISEASE, An Inquiry in the Field of Medical Philosophy, by William A. White, A.M., M.D. Baltimore, The Williams & Wilkins Company, 1926. \$3.00.

If evidence be needed to show that any good thing may be overdone, it may be found in this book's testimony on excessive zeal for analysis. Dissection and other modes of analysis have given us most of our informa-

tion about diseases. Dr. White reminds us that, "for the best results analysis and synthesis should go hand in hand."

It is well pointed out that the overgrowth of specialism has restricted the viewpoint, and that it is necessary to, "envisage the human organism as a whole."

Certain fundamental concepts are noted and illustrations given of their application. Man's place in nature is considered as regards his "relations to the inorganic, organic, and social factors in his environment." Disharmony between the organism and its environment is said to be the controlling idea in the meaning of disease. Each cell plays its part in conditioning all the other cells and is conditioned by all of them.

A great stumbling block in the way of truth is the calling of a symptom a disease; diseases are not entities; what are known as diseases are the results of what happens when the organism comes in contact with inimical agents; the rigid concepts held of health and disease are due to the "magic of words."

Like good music, this book will convey its full meaning to us only on re-reading, and perhaps, re-re-reading.

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INDEX TO VOLUME EIGHTY-EIGHT

ORIGINAL ARTICLES

A New Task for Law, Presidential Address before the Twenty-eighth Annual Meeting	489
Abdominal Pain, The Significance of, by W. M. Hendren (August)	579
Acidosis as a Cause of Acute Abdominal Pain, by Douglas P. Murphy, M.D. (July)	435
Anemia Following Salvarsan Treatment for Syphilis, Acute Aplastic (Case Report), by B. C. Willis, M.D., and C. T. Smith, M.D. (December)	820
Anemia, Pernicious (Case Report), by D. Heath Nisbet, M.D. (November)	764
Angina Pectoris, Surgical Treatment of, by C. C. Coleman, M.D., and J. G. Lyster, M.D. (October)	656
Appendicitis—The Crescendo of Treatment, by John Wesley Long, M.D. (September)	561
Arterial Hypertension, by Verne S. Caviness, M.D. (August)	561
Atypical Appendicitis, The Diagnosis of, by J. W. Davis, M.D. (June)	369
Balanced Mind in Medicine, The, Presidential Address to Medical Society of State of North Carolina, by Wm. De B. MacNider, M.D. (July)	419
Blood Capillaries, Some Clinical Observations on the, by Irving S. Barkdale, M.D. (July)	452
Cancer Problem, The, by James W. Davis, M.D. (September)	573
Carbon Monoxid Poisoning, Treatment with Carbon Dioxid-Oxygen Mixtures, by Luther W. Kelly, M.D. (December)	789
Carcinoma of the Breast and Its Treatment by Surgery X-rays and Radium, by H. Hartwell Bass, M.D. (October)	640
Cardio-Vascular-Renal Disease, The Internist and the General Practitioner in Their Joint Management of, by J. Heywood Gibbs, M.D. (June)	352
Cataract Cases Presenting Features of Unusual Interest, Report of, by J. G. Johnston, M.D. (February)	88
Cervicitis, Endocervicitis and Leucorrhea, by R. T. Ferguson, M.D., F.A.C.S. (August)	512
Chronic Infectious Arthritis, The Utility of Non-Surgical Biliary Drainage in, by George M. Niles, M.D. (July)	434
Clavicle and Scapula, Fracture of the, by J. S. Gaul, M.D. (January)	14
Convulsions, A Discussion of, by Beverley R. Tucker, M.D. (January)	5
Creeping Eruptions, by J. G. Pate, M.D. (June)	365
Crime as a Manifestation of Mental Unsoundness, by Jas. K. Hall, M.D. (October)	633
Dental Conditions and the Health of Children, by M. B. Massey, D.D.S. (May)	300
Diagnosis, A Problem in (Case Report), by F. R. Taylor, M.D. (December)	825
Diseases of the Abdomen from the General Practitioner's Viewpoint, Acute Surgical, by Malcolm Thompson, M.D. (June)	380
Doctors, Science and Humanity, by Allan Craig, M.D., C.M. (May)	318
Enterostomy as a Life Saving Procedure, by D. T. Tayloe, Jr., M.D. (February)	70
Epiphyses of Long Bones, Growth Disturbances in the, by O. L. Miller, M.D. (June)	383
Esophageal Diverticulum, by R. L. Payne, M.D., F.A.C.S. (April)	216
Examination of Women, The Importance of Periodical, by Southgate Leigh, M.D. (June)	367
Exophthalmic Goiter Patient and the Neurasthenic, The, by Hugh S. Black, M.D. (April)	212
Extra-dural Hemorrhage Caused by Violence, The Clinical Diagnosis of, by J. Allison Hodges, M.D. (June)	362
Focal Infection from a Dental Viewpoint, by D. B. Mizell, D.D.S. (January)	24
Gangrene in Both Legs, Complicating Pregnancy (Case Report), by Reid Patterson, M.D.	823
General Practitioner and the Child with Squint, The, by V. K. Hart, M.D. (November)	731
General Practitioners, Qualified, by A. L. Denchfield, M.D. (December)	786
General Practitioner's Work, Illustrating the Range and Strain of The (Case Report), by A. C. Everett, M.D. (October)	687
Glucose in Medicine and Surgery, The Use of, by Garnett Nelson, M.D. (March)	163
Goiter, The Role of Iodine in the Treatment of, by W. H. Sprunt, Jr. (October)	646
Goitre, The Use of Iodine in, by William Banks Dewar, M.D. (August)	515
Harelip and Cleft Palate Deformities, The Surgical Repair of, by James W. Gibbon, M.D. (February)	77
Headache, by R. G. Wilson, M.D. (October)	664
Heart and Pregnancy, The, by A. A. Sussman, M.D. (November)	722
Hemophilia, by C. S. Lawrence, M.D., F.A.C.S. (March)	171
Hemorrhage in Tonsillectomy, The Control of, by W. H. Speas, M.D. (September)	592
Hemorrhagic Pleurisy: Report of a Case, by C. Lydon Harrell, M.D. (September)	571
Hip Joint for Tuberculosis, An Attempt to Fuse the, by Alonzo Myers, M.D., F.A.C.S. (January)	21
Humerus, Fractures of the, by J. S. Gaul, M.D. (September)	584
Jackson, A Tribute to Dr. Chevalier, by J. N. Robertson, M.D. (December)	798
Insulin, Glucose and Blood Therapy in The Infections, The Role of, by J. S. Brewer, B.S., M.D. (February)	72
Intussusception in Infants, Acute, by James W. Gibbon, M.D. (July)	425
Laryngitis in Children, Acute Non-Diphtheritic, by C. N. Peeler, M.D. (October)	661
Lateral Sinus Phlebitis, by V. K. Hart, M.D. (August)	520
Legal Tests of Insanity a Necessary or Useful Device?, Are, by W. M. Hendren (November)	710
Lewis, Richard Henry, M.D., LL.D., F.A.P.H.A., An Appreciation, by J. Howell Way, M.D. (December)	781
Liver Function, Tests for, by Nannie M. Smith, M.A. (March)	176
Long, Crawford W., The Discoverer of Ether Anesthesia, by J. W. Long, M.D., F.A.C.S. (March)	155
Malignant Tumor of Kidney, Embryonic in Origin, by Hamilton W. McKay, M.D., and L. C. Todd, M.D. (May)	277
Medical Examinations, The Significance and Importance of Periodic, by H. S. Cumming, M.D. (January)	1
Medicine and Dentistry, No Laggard Need Apply, In, by P. C. Hull, D.D.S. (March)	174
Medicine to Crime, The Relationship of, by Beverley R. Tucker, M.D. (November)	721
Mental Defectives, Some Suggestions in Regard to, by W. H. Dixon, M.D. (June)	382
Mental Disturbances, Some Causes of, by M. L. Townsend, M.D. (June)	372
Mind in Functional and Organic Diseases, Influence of the, by E. Pierre Mallett, M.D. (September)	563
Nervous Diseases with Especial Reference to Chorea, The Functional, by W. C. Ashworth, M.D. (July)	443
Neurostheniform Syndromes, The Diagnosis and Treatment of Some, by Tom A. Williams, M.B., C.M. (October)	653
Neurofibromata, by Carrington Williams, M.D., F.A.C.S. (May)	304
New-Old Drug of Importance, A, by T. Grier Miller, M.D. (February)	87
Obstetric Analgesia by Means of Morphine-Magnesium Sulphate and Rectal Ether, by G. Bentley Byrd, M.D. (May)	293
Obstetrician, The Accessory Duties of the, by M. Pierce Rucker, M.D. (April)	214

Obstetrics, Can We Improve on Nature in: When and How?, by George H. Ross, M.D. (August)	317
Paralysis of Third, Fifth and Seventh Cranials, Partial (Case Report), by John Hill Tucker, M.D. (November)	766
Parathyroid Hormone and Tetany, The, by Spencer P. Bass, M.D. (February)	82
Pathfinders, Address before Graduating Class, Joseph Price Memorial Hospital, by H. S. Lott, M.D. (August)	496
Pediatrics, The Practical Application of Recent Advances in, by Marion Y. Keith, M.D. (October)	650
Pelves, Contracted, by Ivan Procter, M.D. (April)	219
Peritonitis, Surgical Pathology of, by J. W. Kennedy, M.D., F.A.C.S. (January)	8
Physiotherapy, by P. W. Flagg, M.D. (October)	641
Physiotherapy in Surgery, by G. Carlyle Cooke, M.D. (December)	795
Physiotherapy, The Practical Uses of, by J. K. Alexander, M.D. (November)	733
Post-Operative Urticaria, A Discussion of, by W. J. B. Orr, M.D. (February)	94
Post-eclamptic Toxemia with the Use of Magnesium Sulphate Intravenously (Case Report), by Parks M. King, M.D., and T. Preston White, M.D. (October)	687
Pregnancy and the Lying-in State, Some of the More Important Complications, by C. Y. Candler, M.D. (November)	729
Pre-operative Fluoroscopic Examination of the Chest, by S. A. Rhyne, M.D. (October)	638
Prison Physician, Some Experiences, Observations and Views of a, by L. Jack Smith, M.D. (August)	501
Proctological Conditions, Common; Their Diagnosis and Treatment, by T. J. Summey, M.D. (November)	726
Prostatic Disease, The Pre-Operative and Post-Operative Treatment of, by R. L. Pittman, M.D. (April)	228
Prostatic Obstruction as Seen by the General Surgeon, by E. S. Boice, M.D., F.A.C.S. (May)	282
Pulmonary Abscess, The Diagnosis and Non-Surgical Treatment of, by W. Bernard Kinlaw, M.D. (February)	75
Pulpless Tooth, The Status of the, by H. O. Lineberger, D.D.S. (February)	86
Pyelitis with Special Reference to Diagnosis and Treatment, by Seavey Highsmith, M.D. (March)	146
Quinidin in the Treatment of Certain Cardiac Disorders, by J. Morrison Hutcheson, M.D. (March)	150
Radon (Radium Emanation) in the Treatment of Cancer, The Value of, by D. P. Murphy, M.D. (May)	303
Religion and Science, by Rabbi Edward N. Calisch, Ph.D. (June)	349
Reminders on Digestion, Some, by Matt O. Burke, M.D. (July)	448
Rhinology and Denistry, Important Relationship Between, by H. C. Shirley, M.D. (April)	226
Röntgen-Ray in the Diagnosis of Diseases of the Gall Bladder, The, by Fred N. Hodges, M.D. (May)	297
Röntgen Therapy, The Clinical Application of Deep, by J. W. Hunter, Jr., M.A., M.D. (May)	308
Sensitization Diseases: An Evaluation of the Results of Specific Treatment, by Warren T. Vaughan, M.D. (July)	437
Sexual Neurasthenic, A Plea for the, by Lawrence T. Price, M.D. (April)	223
Shall We or Shall We Not?, by Chas. O'H. Laughinghouse, M.D. (June)	353
Sinusitis, Acute, by Louis Nelson West, M.D. (November)	724
Sinusitis, Anesthesia Dolorosa and Tic Douloureux, Maxillary (Case Report), by V. K. Hart, M.D. (December)	822
Surgery, Dealing with a Number of the Problems in Abdominal and Pelvic (Case Report), by H. S. Lott, M.D. (November)	759
Surgical Treatment of Ulcer of the Stomach and Duodenum Satisfactory?, Is the, by A. Murat Willis (September)	587
Therapeutist, The Confessions of a or Some Meditations on Modern Therapy, by Charles L. Minor, M.D. (February)	65
Tongue in Diagnosis, The, by J. R. Irwin, M.D. (December)	793
Toxaemias of Pregnancy, The, by Wm. deB. MacNider, M.D. (November)	716
Tri-State Medical Association of the Carolinas and Virginia, Twenty-eighth Annual Meet- ing of (March)	139
Presidential Address: J'Accuse La Guerre! W. Lowndes Peple, M.D.	190
Business Session	
Tubal Patency Test, Case Report Demonstrating the Value of the, by R. T. Ferguson, M.D. (January)	23
Tuberculous Patient After Leaving the Sanatorium, The Case of the, by James W. Dickie, M.D.	576
Tularemia, by T. Dewey Davis, M.D., and Douglas VanderHoof, M.D. (May)	290
Tumor in the Pelvis of a Male Adult, a Large, by Robt. C. Bryan, M.D., F.A.C.S., and R. L. Creekmur, M.D. (May)	273
Uterine Hemorrhage, by R. D. McMillan, M.D. (August)	503
Uterine Hemorrhage, The Radium Treatment of Benign, by Douglas P. Murphy, M.D. (December)	797
Vacuum Headache; A Frequently Overlooked Condition, by Casper W. Jennings, M.D. (December)	787
Variations in the Response to Insulin, Individual (Case Report), by E. J. Wannamaker, Jr., M.D. (December)	826
Wassermann Reaction at the Crowell Clinic, The Incidence of a Positive, by L. C. Todd, M.D. (January)	17
What Have You Done for this Society and What Has this Society Done for You?, by J. C. Greene, M.D. (March)	145

EDITORIALS

Al Smith for Making the Title "Doctor" Mean Something	526
Appeal to Caesar, and Caesar's Judgment, An	803
Aw of Authorities	743
Case Reports as a Regular Feature	671
Crowell, Doctor Gordon Bryan	392
"Dear Friend"	238
Departments, About	180
"Doctor" not "Allopath"	670
Doctors and the Lay Press	742
Doctors' News About	674
Dr. William J. Mayo Hails Cyrus Thompson, by W. S. Rankin	801
Dying, The High Cost of	27
Easy Name and the Easy Mark, The	238
Ex-Editor Baker: Editor Bunch	672
Fads in Medicine, Some	802
Falson, Dr. Isaac Wellington, by C. M. Strong, M.D.	531
Faker and His Kinsman, the Twilight Doctor, The	598

Fakers, For War on Medical	461
Fayetteville Meeting, The	179
Function of a Medical Society, a Seldom-stressed	97
Greenville County Medical Society's Way with Fakers	741
Health and Accident, Insurance Forms, Making Out	23
Hemoptysis in Heart Disease	529
Hospitalization, The Cost of	99
Hunnicut, Resolutions on the Death of Dr.	674
Indigestion as a Diagnosis	673
Laughinghouse, Secretary	742
Long, Dr. Royster Pays Tribute to Dr.	602
Long, John Wesley, M.D.—Obituary, by H. H. Ogburn, M.D.	601
Long, Zealot, John Wesley	600
Man's Kinship to Other Animals, Medicine's Concern With	390
Maternal Death-Rate, Our Disgraceful	597
Medical Libraries and Medical Literature	323
Medical Meeting of the Right Sort, A	672
Medical Profession, Speaking of the, by C. M. Van Poole, M.D.	239
Mercurochrome Dangers	673
Opinions and Suggestions	101
Our Very Noble and Approved Good Masters	180
Physical Examination of Apparently Healthful Persons, Periodic	237
"Pure Water," Disingenuousness as to	528
Relative Importance	800
"Service of Supply," The Doctor's	391
Specialists, Some	599
State Board of Medical Examiners Runs True to Form, The	530
State Medical Society, The Meeting of the	465
Testimony from Interested Witnesses, Partial	599
Tri-State in South Carolina, The	740
Tri-State Medical Association, On Widening the Influence of the	26
Tri-State, Why You Should Be a member of the, by Jas. K. Hall, M.D.	96
Vaccination Against Smallpox, For a Standardized	322
Whitehead, Doctor of Medicine, John, by T. E. Anderson, M.D.	322
Words	323

DEPARTMENT EDITORIALS

Abdominal Operations, Complications Following, A. E. Baker, sr.	332
About This and That, Jas. K. Hall	620
A. M. A. Books of Especial Value, Some, Fred R. Taylor	538
American Orthopedic Association, O. L. Miller	334
Aneurysm of the Thoracic Aorta, John D. MacRae	106
Appendicitis, Superb Results in Treating, George H. Bunch	676
Arthritis, Paul H. Ringer	751
Arthritis, The Etiology and Pathology of, Paul H. Ringer	811
Benjamin Franklin, Medicine Man, Jas. K. Hall	112
Birth Injuries, Robt. E. Seibels	326
Blood Smears, Examination of, Harvey P. Barret	683
Breath Devises, Robt. E. Seibels	816
Bronchial and Broncho-Pulmonary Conditions, Iodized Oil in Diagnosis and Treatment of, Paul H. Ringer	482
Capital Punishment, Jas. K. Hall	182
Carbuncles, Geo. H. Bunch	806
Cesarian Section, The Low Cervical, Robt. E. Seibels	406
Child-Birth as a Mind-Disturber, Jas. K. Hall	679
Cholelithiasis, Abstract on Article on, A. E. Baker, sr.	110
Dead Tooth, The Status of the, W. M. Robey	330
Dementia Precox Problem, The Obscurity and the Magnitude of the, Jas. K. Hall	36
Dentistry, Some Objectives in, W. M. Robey	757
Destroyer, The Great, Jas. K. Hall	747
"Diarrhea and Enteritis as a Public Health Problem," Discussion of, Harvey P. Barret	548
Differential Count in Various Diseases, The Value of, Harvey P. Barret	807
Doctor and Patient, Jas. K. Hall	338
Dyes and Mercury Compounds Intravenously in the Treatment of Infections, The Use of, Harvey P. Barret	115
Eczematoid Ringworm of the Hands and Feet, Joseph A. Elliott	33
Education is Your Child Getting? What Sort of, F. H. Richardson	252
Ephedrin: A New Drug of More Than Ordinary Interest, Fred R. Taylor	681
Epididymitis with Special Reference to Prevention, The Management of Acute, Hamilton W. McKay	402
Epiphysis of the Hip, Some Changes In, O. L. Miller	535
Fatigue Posture, and Its Correction, Frank Howard Richardson	753
Feeling-mindedness, Changing Ideas About, Jas. K. Hall	321
Food Habits of Children, Faulty, F. H. Richardson	608
Foreign Body of Lung, Organic, C. N. Peeler	480
Foreign Body Work, Observations on, C. N. Peeler	34
Fracture Cases, For Best Results in, O. L. Miller	111
Fracture of Both Bones of the Forearm, O. L. Miller	243
Fractures—A Word as to Their Management, Wm. A. Boyd	678
Gall Bladder, Visualization of the, John MacRae	321
Gastric and Duodenal Ulcer, Abstract of Paper on, A. E. Baker, sr.	35
Genito-Urinary Surgery as a Specialty, The Development of: Final Article, A. J. Crowell	113
Glaucoma in Myopia, Henry L. Sloan	614
Glaucoma Simplex, Concerning, Henry L. Sloan	402
Goiter, A. E. Baker, sr.	242
Gonorrhea, The Diagnosis of Subacute and Chronic, Hamilton W. McKay	250
Gonorrhea, The Management of Acute, Hamilton W. McKay	552
Headaches, Ocular, H. L. Sloan	812
Heart, The, Paul H. Ringer	30
Hip Joint Tuberculosis, O. L. Miller	817
Hospital Association Meeting, O. L. Miller	474
Hypertension, Essential, Paul H. Ringer	603
Hyperthyroidism, X-Ray Treatment of, John D. MacRae	244
Influenza, The Prevention and Treatment of, F. R. Taylor	808
Internal Medicine, What is?, Paul H. Ringer	188
Intravenous Therapy, The Use and Abuse of, F. R. Taylor	605
Lower Spine Based on a Roentgenographic Study of Children and Adults, Malformations of the, O. L. Miller	37
Male Urethra, The Management of Stricture of the, Hamilton W. McKay	685
Medical Section at the A. M. A. in Dallas, The, Paul H. Ringer	328

Mental Disease Problem, The, Jas. K. Hall	472
Mind, What is the?, Jas. K. Hall	678
Mothers and Children, F. H. Richardson	550
Muscle Spasms Painful, Frederick R. Taylor	750
Nephritis, Paul H. Ringer	107
New Products Accepted by the Council, Some, Fred R. Taylor	540
Ophthalmia, Sympathetic, Henry L. Sloan	187
Orthopedic Hospital, The North Carolina, O. L. Miller	185
Orthopedic Surgery Along the Way, O. L. Miller	757
Osteomyelitis, John D. MacRae	814
Outline of Plan on Which This Department Will be Conducted, Hamilton W. McKay	181
Patient Has His Say, The, W. M. Robey	240
Penile Sores, The Diagnosis and Management of, Hamilton W. McKay	476
Physical Therapy, Frederick R. Taylor	759
Pityriasis Rosea, Jos. A. Elliott	811
Play for the Doctor, The Need of, Paul H. Ringer	675
Prescription, A, Fred R. Taylor	537
Pro Quo?, Jas. K. Hall	746
Professions, Commercializing the, W. M. Robey	184
Prostatitis, Acute, Chronic, Prostatic Abscess, Hamilton W. McKay	342
Psychiatry in Sing-Sing, Jas. K. Hall	394
Pulmonary Tuberculosis, Surgery in the Treatment of, Paul H. Ringer	241
Rearing of Children, Rational, F. H. Richardson	117
Religious Freedom, Is There?, Jas. K. Hall	805
"Renal Rickets," O. L. Miller	396
Science and Religion, Jas. K. Hall	468
Secretion, etc., with the Naked Eye, Examining, Harvey P. Barret	622
Shortening the School Day, More About, F. H. Richardson	336
Sinus Disease in Children, F. E. Motley	749
Society Affiliations, Benefits of, W. M. Robey	115
Sodium Thiosulphate in Dermatology, Jos. A. Elliott	480
State Duty, Another, Jas. K. Hall	540
Sterilization, Operative, Robt. E. Seibels	247
Syphilis, Bismuth in the Treatment of, Joseph A. Elliott	107
Syphilis, Diagnosis of Primary, J. A. Elliott	240
Syphilis, The Standardized Complement Fixation Test for, L. C. Todd	404
Syphilitic Pregnant Woman, The, Jos. A. Elliott	677
Teaching May be Made Less Difficult, How, F. H. Richardson	39
Test of Time, The, Frederick R. Taylor	750
Tetanus, Geo. H. Bunch	748
Therapeutics, Frederick R. Taylor	467
Thinking Rather than Feeling, On, Jas. K. Hall	394
Thomas Jefferson and Religion, Jas. K. Hall	468
Thymus in Children of the Tonsil and Adenoid Age, The, C. N. Peeler	245
Tooth is an Offender, When a, W. M. Robey	478
Tuberculosis of the Hip, Fusing the Joints in, O. L. Miller	618
Tuberculous Enteritis, John D. MacRae	752
Uncle Sam, Doctor of Medicine, Jas. K. Hall	805
Urethra, Rupture of the, Hamilton W. McKay	817
Urinary Extravasation, Hamilton W. McKay	755
Vesical Distention, Chronic, Hamilton W. McKay	616
What is Pellagra?, Jas. K. Hall	746
X-Ray Diagnosis in Pediatrics, John D. MacRae	544
X-Ray Service in Hospitals of 50 to 100 beds, John D. MacRae	398
X-Rays, The Misuse of, John D. MacRae	604

AUTHORS

Alexander, J. R.	733	Irwin, J. R.	793
Ashworth, W. C.	443	Jennings, Casper W.	787
Barksdale, Irving S.	452	Johnston, J. G.	88
Bass, H. Hartwell	640	Keith, Marion Y.	650
Bass, Spencer, P.	82	Kelly, Luther W.	789
Black, Hugh S.	212	Kennedy, J. W.	8
Boice, E. S.	282	King, P. M.	687
Brewer, J. S.	72	Kinlaw, W. Bernard	75
Brockmann, H. L.	579	Laughinghouse, Chas. O'H.	355
Bryan, Robt. C.	273	Lawrence, C. S.	171
Burke, Matt O.	418	Leigh, Southgate	367
Byrd, G. Bentley	293	Long, J. W.	155, 561
Calish, Edward N.	349	Lineberger, H. O.	86
Candler, C. Z.	729	Lott, H. S.	496, 759
Caviness, Verne S.	507	Lyerly, J. G.	419, 716
Coleman, C. C.	656	MacNider, Wm. deB.	277
Cooke, G. Carlyle	795	McKay, Hamilton W.	503
Craig, Allan	318	McMillan, R. D.	563
Cumming, H. S.	1	Mallett, E. Pierre	300
Davis, J. W.	369, 573	Massey, M. B.	383
Davis, T. Dewey	290	Miller, O. L.	87
Denchfield, Arthur L.	786	Miller, T. Grier	65
Dewar, Wm. Banks	515	Minor, Charles L.	24
Dickie, James W.	576	Mizell, D. B.	303, 435, 797
Dixon, W. H.	382	Murphy, D. P.	21
Everitt, A. C.	687	Myers, Alonzo	163
Ferguson, Robert Thrift	23, 512	Nelson, Garnett	431
Flagge, P. W.	644	Nilis, George M.	764
Gaul, J. S.	14, 584	Nisbet, D. H.	74
Gibbs, J. Heywood	352	Orr, W. J. B.	365
Gibson, James W.	77, 429	Pate, J. G.	822
Greene, J. C.	145	Patterson, Reid	216
Hall, Jas. K.	633	Payne, R. L.	661
Harrell, C. Lydon	571	Peeler, C. N.	228
Hart, V. K.	520, 731, 822	Pittman, R. L.	219
Hendren, W. M.	489, 710	Price, Lawrence T.	628
Highsmith, Seavy	146	Procter, Ivan	798
Hodges, Fred M.	297	Rhyn, S. A.	517
Hodges, J. Allison	562	Roberson, J. N.	214
Hull, P. C.	174	Ross, George H.	226
Hunter, J. W., jr.	308	Rucker, M. Pierce	
Hutcheson, J. Morrison	150	Shirley, H. C.	

Smith, C. T.	820	Tucker, J. H.	766
Smith, L. Jack	501	VanderHooft, Douglas	290
Smith, Nannie M.	176	Vaughan, Warren T.	437
Speas, W. P.	592	Wannamaker, E. J., jr.	826
Sprunt, W. H., jr.	646	Way, J. Howell	781
Summey, T. J.	726	West, Louis Nelson	724
Sussman, A. A.	722	White, T. P.	687
Taylor, D. T., jr.	70	Williams, Carrington	304
Taylor, F. R.	825	Williams, Tom A.	653
Thompson, Malcolm	380	Willis, A. Murat	587
Todd, L. C.	17, 277	Willis, B. C.	820
Townsend, M. L.	372	Wilson, R. G.	664
Tucker, Beverley R.	5, 721		







